

DIGESTIVE DISEASE DAYS

2024

# PROGRAMMA

11 en 12 september

Congrescentrum NH Koningshof  
Veldhoven

## **Het programma van de DDD werd samengesteld met inbreng van de volgende verenigingen en secties:**

Nederlandse Vereniging voor Gastro-enterologie  
Nederlandse Vereniging voor Gastrointestinale Chirurgie  
Nederlandse Vereniging voor Hepatologie  
Nederlandse Vereniging van Maag-Darm-Leverartsen

### **Secties:**

Sectie Gastrointestinale Endoscopie  
Sectie Experimentele Gastroenterologie  
Sectie Neurogastroenterologie en Motiliteit  
Sectie Gastrointestinale Oncologie  
Sectie Inflammatoire Darmziekten IBD  
Sectie Kinder-MDL  
Verpleegkundigen & Verzorgenden Nederland – MDL  
PhD Netwerk

**INHOUDSOPGAVE****pag.**

Belangrijke mededeling	5
<b>Dinsdag 10 september 2024</b>	
Programma Cursorisch Onderwijs in maag-darm-leverziekten – Gastro Update	6
<b>Woensdag 11 september 2024</b>	
Symposium/abstracts IBD I - Brabantzaal	8
Plenaire opening DDD en President Select - Brabantzaal	9
Uitreiking NVGE Gastrostartsubsidies	10
NVGE Invited speaker Prof. dr. J. Tack – Brabantzaal	10
Abstractsessie Sectie Gastrointestinale Endoscopie- Brabantzaal	11
Symposium Werkgroep Bariatrie – Brabantzaal	13
Symposium/abstracts IBD II - Beeldvorming IBD - Brabantzaal	13
Top abstracts NVGE 2024 – Brabantzaal	14
Symposium NVH - Richtlijn HCC - Auditorium	16
Abstractsessie Oncologie/NVGIC – Auditorium	16
Symposium Groene MDL - Auditorium	17
MLDS Symposium Vroegsignalering Alcoholproblematiek – Auditorium	18
Career Event NVMDL i.o. – Baroniezaal	19
Abstractsessie Nederlandse Vereniging voor Hepatologie - Baroniezaal	19
Meet the expert NVGIC – Parkzaal	21
Seniorenprogramma – zaal 80	21
Programma postersessies – Meijerijfoyer	22-23

**Tijdstippen diverse ledenvergaderingen woensdag:**

Nederlandse Vereniging voor Gastroenterologie	11 september, 12.15 uur Brabantzaal
Nederlandse Vereniging voor Hepatologie	11 september, 14.45 uur Baroniezaal

**Donderdag 12 september 2024**

Symposium MLDS - Brabantzaal	24
Videosymposium Sectie Gastrointestinale Endoscopie – Auditorium	24
Symposium/abstracts IBD III - Nieuwe ontwikkelingen in IBD - Auditorium	24
Symposium Sectie Neurogastroenterologie en Motiliteit: Reflux – Auditorium	25
Best of DDD - Auditorium	25
Meet the expert PEC - Baroniezaal	25
Meet the expert Arbeidsdeskundige en IBD - Baroniezaal	26
Meet the expert Microscopische Colitis - Baroniezaal	26
Symposium digitalisering I & II – Parkzaal	27
Symposium Sectie Gastrointestinale Oncologie – Parkzaal	28
PhD Netwerk - Zaal 8I	28
Programma postersessies – Meijerijfoyer	29-30
Programma V&VN MDL – Plenair – Brabantzaal	31
Programma V&VN MDL - Sectie Gastrointestinale Endoscopie - Parkzaal	31
Programma V&VN MDL - IBD - Zaal 8I	31

**Tijdstippen diverse ledenvergaderingen donderdag**

Nederlandse Vereniging van Maag-Darm-Leverartsen 12 september, 15.15 uur Baroniezaal

## **Belangrijke mededeling over de aanwezigheid van farmaceutische industrieën**

Aan alle deelnemers tijdens de Digestive Disease Days op 11 en 12 september 2024

De Nederlandse Vereniging voor Gastroenterologie kent een jarenlange samenwerking met de farmaceutische industrie. De vereniging stelt de farmaceutische industrie in de gelegenheid aanwezig te zijn bij de wetenschappelijke vergaderingen met een stand. Mede hierdoor kan de vereniging haar wetenschappelijke bijeenkomsten organiseren.

De Geneesmiddelenwet zegt dat - onder strikte voorwaarden - de farmaceutische industrie alleen reclame mag maken voor receptgeneesmiddelen voor personen die bevoegd zijn om dergelijke geneesmiddelen voor te schrijven. Alle andere personen (inclusief bijvoorbeeld verpleegkundigen, endoscopie-assistenten en biochemici) worden beschouwd als "publiek". De farmaceutische industrie mag geen reclame maken voor receptgeneesmiddelen voor publiek.

De Nederlandse Vereniging voor Gastroenterologie is een wetenschappelijke vereniging voor personen die beroepsmatig betrokken zijn bij zorg, onderwijs en onderzoek ten behoeve van patiënten met maag-darm- en leveraandoeningen. Dat betekent dat ook personen die geen arts zijn, lid van de NVGE zijn. De aanwezigheid van artsen, niet-artsen en farmaceutische industrieën tijdens het congres kan de NVGE ongewild in aanraking brengen met de inspectie voor de gezondheidszorg, sectie reclametoezicht, en daarmee in diskrediet worden gebracht. Dat willen wij uiteraard voorkomen.

In verband met de Gedragscode Geneesmiddelenreclame van de CGR en de aan het NVGE-congres verbonden expositie van farmaceutische producten, medische instrumenten en voedingsmiddelen, zal bij uw congresregistratie via de NVGE-website worden gevraagd naar uw bevoegdheid om medicijnen voor te schrijven.

Alle congresdeelnemers dragen verplicht een congresbadge waarop behalve de naam ook beroep/ functie staat aangegeven. Farmaceutische standhouders benaderen uitsluitend congresdeelnemers die de bevoegdheid hebben om receptgeneesmiddelen voor te schrijven of ter hand te stellen. Om dit extra te verduidelijken zal wederom worden gekozen voor verschillende kleuren congresbadges.

Uit het bovenstaande volgt dat aanwezige reclame-uitingen en merkproductinformatie van farmaceutische industrieën alleen gericht zijn op personen die bevoegd zijn om de betreffende geneesmiddelen voor te schrijven. Wij maken u erop attent dat het voor niet-artsen dan ook niet is toegestaan de stands van de aanwezige farmaceutische industrieën te bezoeken.

De NVGE en farmaceutische industrie (sponsors) vertrouwen erop u met bovenstaande voldoende te hebben geïnformeerd.

Bestuur van de NVGE

**Onderwerp: Oesofagus en maag, PEG**

10.30-11.00	Registratie, koffie
11.00-11.10	Opening door dr. R.J. de Knegt, MDL-arts Erasmus MC, Rotterdam <i>Pre-test vragen met behulp van Mentimeter.</i>
<b>Voorzitters:</b>	Dr. R.J. de Knegt, MDL-arts, Erasmus MC, Rotterdam Dr. Y. Peters, aios MDL, Ziekenhuis Rijnstate, Arnhem
11.10-11.35	Indicaties en contra-indicaties voor PEG-plaatsing <i>Dr. D. Strijbos, MDL-arts, Máxima Medisch Centrum, Veldhoven</i>
11.35-12.00	Technieken en apparatuur voor PEG-plaatsing <i>R.J.J. de Ridder, MDL-arts, MUMC+, Maastricht</i>
12.00-12.30	Multidisciplinaire zorg voor de patiënt met een PEG-sonde, verpleegkundige. <i>F. Rienstra, PEG-Verpleegkundige, Amsterdam UMC</i>
<b>12.30-13.30</b>	<b>Lunch</b>
13.30-14.00	Refluxoesofagitis (Epidemiologie, pathofysiologie, behandeling, complicaties) <i>Dr. J. Honing, MDL-arts, Erasmus MC, Rotterdam</i>
14.00-14.30	Barrett oesofagus <i>Dr. L.C. Duits, MDL-arts, Amsterdam UMC</i>
14.30-15.00	Oesofaguscarcinoom, chirurgische behandeling <i>Prof. dr. B.P.L. Wijnhoven, chirurg, Erasmus MC, Rotterdam</i>
<b>15.00-15.30</b>	<b>Pauze</b>

Vervolg programma op volgende pagina

DINSDAG 10 SEPTEMBER 2024

Vervolg programma

- 15.30-16.00 Oesofaguscarcinoom: endoscopische behandeling  
*Prof. dr. B.L.A.M. Weusten, MDL-arts, UMC Utrecht en St. Antonius, Nieuwegein*
- 16.00-16.30 Maag: zuurgerelateerde ulcera, H. pylori, carcinoom  
*Dr. W. de Boer, MDL-arts, Bernhoven, Uden*
- 16.30-17.00 Bariatrische chirurgie: voor en na de ingreep  
*T.C.C. Boerlage, MDL-arts, Groene Hart Ziekenhuis, Gouda*
- 17.00-17.30 Prehabilitatie: Fit4Surgery  
*Dr. G. Slooter, chirurg, Máxima Medisch Centrum, Veldhoven*
- 17.30-17.45 Eindtest vragen met behulp van Mentimeter  
*Prijsuitreiking*
- 17.45-17.55 Interview NVMDL i.o. m.b.t. commissiewerk
- 18.00 Einde programma**

**Aansluitend (vegetarisch Aziatisch) buffet**

*Deelname is verplicht voor aios MDL.*

*Voor aios heelkunde differentiatie GE geldt: eenmaal verplicht in het differentiatiejaar.*

Op het cursorisch onderwijs zijn conform de eisen van het Centraal Register Kort Beroepsonderwijs leveringsvoorwaarden van toepassing.

Zie [www.nvge.nl](http://www.nvge.nl) en [www.mdl.nl](http://www.mdl.nl)



Voorzitters: A. Rezazadeh en A.C. de Vries

*Voordrachten in het Nederlands, 5 minuten presentatie en 3 minuten discussie*

- 09.30** Long-term effectiveness and safety of ustekinumab in patients with ulcerative colitis: real-world data from the IBDREAM and Initiative on Crohn and Colitis registries  
*K.M. Totté<sup>1</sup>, L.M.M. Verleye<sup>1,2,3</sup>, R. West<sup>4</sup>, P.B. Mensink<sup>5</sup>, A.C. de Vries<sup>6</sup>, A.E. van der Meulen-de Jong<sup>7</sup>, M. Löwenberg<sup>8</sup>, F.D.M. van Schaik<sup>9</sup>, S. van der Mare<sup>10</sup>, M.J. Pierik<sup>2,3</sup>, Z. Mujagic<sup>2,3</sup>, T.E. Römkens<sup>11</sup>, M. Duijvestein<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, <sup>2</sup>Dept. of Gastroenterology and Hepatology, MUMC+, Maastricht, <sup>3</sup>Dept. of Gastroenterology and Hepatology, NUTRIM, Maastricht University, Maastricht, <sup>4</sup>Dept. of Gastroenterology, St. Franciscus Gasthuis & Vlietland, Rotterdam, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Medisch Spectrum Twente, Enschede, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>8</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>9</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>10</sup>Dept. of Gastroenterology and Hepatology, Haaglanden Medisch Centrum, Den Haag, <sup>11</sup>Dept. of Gastroenterology and Hepatology, Jeroen Bosch Ziekenhuis, Den Bosch, Nederland*
- 09.38** Factors associated with need for second-line immunosuppressive treatment in patients with immune checkpoint inhibitor-induced colitis  
*M.R. Naber<sup>1</sup>, M. J. M. van Eijs<sup>2</sup>, M. Löwenberg<sup>3</sup>, B. Oldenburg<sup>4</sup>, K. P. M. Suijkerbuijk<sup>2</sup>, F.D.M. van Schaik<sup>4</sup>, <sup>1</sup>Dept. of Gastroenterology, UMC Utrecht, Utrecht, <sup>2</sup>Dept. of Medical Oncology, UMC Utrecht, Utrecht, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>4</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, Nederland*
- 09.46** State of the art: Positioneren nieuwe therapieën na anti-TNF?  
*Dr. R.L. West, MDL-arts, Franciscus Gasthuis & Vlietland, Rotterdam*
- 10.21** The efficacy of comprehensive multivitamin and mineral supplement to treat symptoms of fatigue in patients with Inflammatory Bowel Disease  
*R.L.H. Laheij<sup>1</sup>, A.D. Bierens-Peters<sup>1</sup>, K.F. Bruin<sup>1</sup>, M.W.M.D Lutgens<sup>1</sup>, M. Sikkema<sup>1</sup>, U. De Wit<sup>1</sup>, R.J.F. Laheij<sup>1</sup> <sup>1</sup>Dept. of Gastroenterology and Hepatology, Elisabeth-TweeSteden Ziekenhuis, Tilburg, Nederland*
- 10.29** Pregnancy outcomes in patients with inflammatory bowel disease in three university medical centers in the Netherlands  
*D.G. Bouwknecht<sup>1</sup>, G. Dijkstra<sup>1</sup>, W.A. van Dop<sup>2</sup>, C.J. van der Woude<sup>3</sup>, M.C. Visschedijk<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, UMC Groningen, Groningen, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, Nederland*
- 10.37** Can dietary patterns and diet quality be associated with disease activity?  
*L.J.M. Koppelman<sup>1</sup>, C.L. Stevens<sup>2</sup>, I. Barth<sup>2</sup>, A.E. van der Meulen-de Jong<sup>1</sup>, M.J.E. Campmans-Kuijpers<sup>2</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>2</sup>Dept. of Gastroenterology and Hepatology, UMC Groningen, Groningen, Nederland*



Voorzitters: A.G.L. Bodelier en A.E. van der Meulen-de Jong

**11.15** Cholangioscopy-guided Single vs Bite-on-Bite biopsies in Indeterminate Biliary Duct Strictures

D.M. de Jong<sup>1</sup>, P.J.F. de Jonge<sup>1</sup>, P.M.C. Stassen<sup>1</sup>, P. Karagyozov<sup>2</sup>, J.J. Vila<sup>3</sup>, I. Fernandez-Urien<sup>3</sup>, M. James<sup>4</sup>, S.V. Venkatachalapathy<sup>4</sup>, K.W. Oppong<sup>5</sup>, A. Anderloni<sup>6</sup>, A. Repici<sup>7</sup>, R. Gabbiadini<sup>7</sup>, D. Joshi<sup>8</sup>, M. Ellrichmann<sup>9</sup>, L. Kylänpää<sup>10</sup>, M. Udd<sup>10</sup>, F. van der Heide<sup>11</sup>, P. Hindryckx<sup>12</sup>, G. Corbett<sup>13</sup>, K. Basiliya<sup>14</sup>, V. Cennamo<sup>15</sup>, S. Landi<sup>15</sup>, S. Phillipotts<sup>16</sup>, G.J.M. Webster<sup>16</sup>, M.J. Bruno<sup>17</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC University Medical Center, Rotterdam, <sup>2</sup>Dept. of Gastroenterology, Acibadem City Clinic University Hospital Tokuda, Sofia, Bulgarije, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Hospital Universitario de Navarra, Pamplona, Spanje, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Nottingham University Hospitals NHS Trust, and School of Medicine, University of Nottingham, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Newcastle Upon Tyne NHS Foundation Trust, Newcastle, Verenigd Koninkrijk, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Fondazione I.R.C.C.S. Policlinico San Matteo, Pavia, Italië, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Humanitas Research Hospital, Milano, Italië, <sup>8</sup>Institute of Liver Studies, King's College Hospital NHS Foundation Trust, London, Verenigd Koninkrijk, <sup>9</sup>Dept. of Gastroenterology and Hepatology, University Hospital Schleswig-Holstein, Campus Kiel, Kiel, Duitsland, <sup>10</sup>Dept. of Gastrointestinal Surgery, Helsinki University Central Hospital, Helsinki, Finland, <sup>11</sup>Dept. of Gastroenterology and Hepatology, Universitair Medisch Centrum Groningen, Groningen, <sup>12</sup>Dept. of Gastroenterology and Hepatology, Universitair Ziekenhuis Gent, Gent, België, <sup>13</sup>Dept. of Gastroenterology and Hepatology, Cambridge University Hospitals NHS Foundation Trust, Cambridge, Verenigd Koninkrijk, <sup>14</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>15</sup>Dept. of Gastroenterology and Interventional Endoscopy, Local Health Authority of Bologna, Bologna, Italië, <sup>16</sup>Dept. of Gastroenterology, University College London Hospitals, London, Verenigd Koninkrijk, <sup>17</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, Nederland

**11.23** Hyperbaric oxygen therapy for surgical fistula closure is feasible in perianal fistulizing Crohn's disease

L.G.M. Mulders<sup>1</sup>, K.J. Beek<sup>2</sup>, J.A.W. Tielbeek<sup>3</sup>, J. Stoker<sup>2</sup>, G.R.A.M. D'Haens<sup>1</sup>, C.J. Buskens<sup>4</sup>, R.A. van Hulst<sup>5</sup>, K.B. Gecse<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Radiology and Nuclear Medicine, Amsterdam UMC, Amsterdam, <sup>3</sup>Dept. of Radiology and Nuclear Medicine, Spaarne Gasthuis, Haarlem, <sup>4</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, <sup>5</sup>Dept. of Anesthesiology, Amsterdam UMC, Amsterdam, Nederland

- 11.31 MRI-based score accurately identifies liver transplant patients without rejection avoiding need for liver biopsy: a multisite European study  
*J. Schaapman<sup>1</sup>, E.S. Shumbayawonda<sup>2</sup>, M. Castelo-Branc<sup>3</sup>, F. Caseiro Alves<sup>3</sup>, T. Costa<sup>3</sup>, E. Fitzpatrick<sup>4</sup>, K. Tupper<sup>5</sup>, A. Dhawan<sup>5</sup>, M. Deheragoda<sup>6</sup>, E. Sticova<sup>6</sup>, M. French<sup>2</sup>, C. Beyer<sup>7</sup>, S. Rymell<sup>7</sup>, D. Tonev<sup>7</sup>, H. Verspaget<sup>1</sup>, S. Neubauer<sup>8</sup>, R. Banerjee<sup>7</sup>, H.J. Lamb<sup>9</sup>, M.J. Coenraad<sup>1</sup>,*  
*<sup>1</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>2</sup>Dept. of Radiology, Perspectum Diagnostics Ltd, Oxford, <sup>3</sup>Dept. of Radiology, Coimbra Institute for Biomedical Imaging and Translational Research, Coimbra, Portugal, <sup>4</sup>Dept. of Gastroenterology and Hepatology, King's college Hospital, Londen, <sup>5</sup>Dept. of Pediatrics, King's college Hospital, Londen, <sup>6</sup>Dept. of Pathology, King's college Hospital, Londen, <sup>7</sup>Dept. of Research & Development, Perspectum Diagnostics Ltd, Oxford, <sup>8</sup>Dept. of Radiology, Radcliffe Department of Medicine, Oxford, Verenigd Koninkrijk, <sup>9</sup>Dept. of Radiology, Leids Universitair Medisch Centrum, Leiden, Nederland*
- 11.39 **Uitreiking Gastrostart subsidies**
- 11.45 **Keynote Lecture**  
Altered gastric motility, from dumping syndrome to gastroparesis  
*Prof. dr. J. Tack, MDL-arts, UZ Leuven, België*
- 12.15 Algemene Ledenvergadering NVGE
- 12.30 Gemodereerde postersessies in de Meierij Foyer  
Lunch in de expositiehal

Voorzitters: P.J.F. de Jonge en W.B. Nagengast

Voordrachten in het Nederlands, 5 minuten presentatie en 3 minuten discussie

- 13.30 Patient's per-procedural colonoscopy experience: how accurate is the clinician's assessment?  
 Q.N.E. van Bokhorst<sup>1</sup>, C.V. Geerlings<sup>1</sup>, M. van der Vlugt<sup>1</sup>, K.J. Nass<sup>2</sup>, L.J. Neilson<sup>3, 4</sup>, P. Fockens<sup>1</sup>, C.J. Rees<sup>3, 4</sup>, E. Dekker<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Internal Medicine, Rijnstate Ziekenhuis, Arnhem, <sup>3</sup>Dept. of Gastroenterology, South Tyneside and Sunderland NHS Foundation Trust, South Shields, Verenigd Koninkrijk, <sup>4</sup>Dept. of Gastroenterology, Population Health Sciences Institute Newcastle University, Newcastle Upon Tyne, Verenigd Koninkrijk
- 13.38 Gastrointestinal angiodysplasia resolution following transcatheter aortic valve implantation: a prospective cohort study  
 L.C.M.J. Goltstein<sup>1</sup>, M.J.P. Rooijackers<sup>2</sup>, N.D.E. Thierens<sup>1</sup>, S.C.M. Schoormans<sup>3</sup>, H. Beaumont<sup>4</sup>, C. Houdeville<sup>5</sup>, M.P.A. Hoeks<sup>3</sup>, E.J.M. van Geenen<sup>1</sup>, S.R. Rijpma<sup>3</sup>, X. Dray<sup>5</sup>, N. van Royen<sup>2</sup>, J.P.H. Drenth<sup>4</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, <sup>2</sup>Dept. of Cardiology, Radboudumc, Nijmegen, <sup>3</sup>Dept. of Hematology, Radboudumc, Nijmegen, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>5</sup>Dept. of Gastroenterology and Interventional Endoscopy, Sorbonne University, Parijs, Frankrijk
- 13.46 EUS-CDS is associated with less complications compared to PTBD after a failed ERCP in patients with a distal malignant common bile duct obstruction: Prospective outcomes of a Dutch registry  
 M.J.P. de Jong<sup>1</sup>, F. van Delft<sup>1</sup>, E.J.M. van Geenen<sup>1</sup>, A. Bogte<sup>2</sup>, R.C. Verdonk<sup>3</sup>, N.G. Venneman<sup>4</sup>, J.M. Vrolijk<sup>5</sup>, J.W.A. Straathof<sup>6</sup>, R.A. Bijlsma<sup>7</sup>, S.D. Kuiken<sup>8</sup>, R. Quispel<sup>9</sup>, M. Hadithi<sup>10</sup>, K. Basiliya<sup>11</sup>, F.P. Vleggaar<sup>2</sup>, T.M. Bisseling<sup>1</sup>, T.R. de Wijkerslooth<sup>12</sup>, M.J. Bruno<sup>13</sup>, R.L.J. van Wanrooij<sup>14</sup>, P.D. Siersema<sup>15, 16</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, <sup>2</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>3</sup>Dept. of Gastroenterology and Hepatology, St. Antonius Ziekenhuis, Nieuwegein, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Medisch Spectrum Twente, Enschede, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Rijnstate Ziekenhuis, Arnhem, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Maxima Medisch Centrum, Veldhoven, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Martini Ziekenhuis, Groningen, <sup>8</sup>Dept. of Gastroenterology and Hepatology, OLVG, Amsterdam, <sup>9</sup>Dept. of Gastroenterology and Hepatology, Reinier de Graaf Gasthuis, Delft, <sup>10</sup>Dept. of Gastroenterology and Hepatology, Maastad Ziekenhuis, Rotterdam, <sup>11</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>12</sup>Dept. of Gastroenterology and Hepatology, Antoni van Leeuwenhoek Ziekenhuis, Amsterdam, <sup>13</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>14</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>15</sup>Dept. of Gastroenterology, Erasmus MC, Rotterdam, <sup>16</sup>Dept. of Gastroenterology, Radboudumc, Nijmegen, Nederland

- 13.54 Heterozygous variant of CYP2C8\*3 as protective factor for developing post-ERCP pancreatitis.  
*M.J.P. de Jong<sup>1</sup>, R.N. Kuipers<sup>1</sup>, C.J. Sperna Weiland<sup>2</sup>, R.C. Verdonk<sup>3</sup>, T.M. Bisseling<sup>1</sup>, D. Dalloyaux<sup>1</sup>, N.G. Venneman<sup>4</sup>, M. Hadithi<sup>5</sup>, E.J.M. van Geenen<sup>1</sup>, J.P.H. Drenth<sup>6</sup>, R. te Morsche<sup>1</sup>, M.J. Bruno<sup>7</sup>, F. van Delft<sup>1</sup>, P.D. Siersema<sup>8, 9</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Jeroen Bosch Ziekenhuis, Den Bosch, <sup>3</sup>Dept. of Gastroenterology and Hepatology, St. Antonius Ziekenhuis, Nieuwegein, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Medisch Spectrum Twente, Enschede, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Maasstad Ziekenhuis, Rotterdam, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>8</sup>Dept. of Gastroenterology, Erasmus MC, Rotterdam, <sup>9</sup>Dept. of Gastroenterology, Radboudumc, Nijmegen, Nederland*
- 14.02 Accuracy and interobserver agreement of subepithelial lesions with endoscopic ultrasonography (EUS)  
*C.A. Verloop<sup>1</sup>, L. Hol<sup>1</sup>, R. Quispel<sup>2</sup>, R.C. Verdonk<sup>3</sup>, P. Honkoop<sup>4</sup>, M.J. Bruno<sup>5</sup>, L.M.J.W. van Driel<sup>5</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Maasstad Ziekenhuis, Rotterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Reinier de Graaf Gasthuis, Delft, <sup>3</sup>Dept. of Gastroenterology and Hepatology, St. Antonius Ziekenhuis, Nieuwegein, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Albert Schweitzer Ziekenhuis, Dordrecht, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, Nederland*
- 14.10 Colonoscopy or FIT for colorectal cancer screening: a risk-based recommendation  
*L.A. van Duuren<sup>1</sup>, I. Lansdorp-Vogelaar<sup>1</sup>, <sup>1</sup>Dept. of Public Health, Erasmus MC, Rotterdam, Nederland*
- 14.18 Trends over time and inter-hospital variation in the primary treatment approach of T1 colon carcinomas in the Netherlands  
*J. Hanevelt<sup>1</sup>, F.N. van Erning<sup>2, 3</sup>, W.H. de Vos Tot Nederveen Cappel<sup>4</sup>, F.P. Vleggaar<sup>5</sup>, H.L. van Westreenen<sup>6</sup>, L.M.G. Moons<sup>5</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Isala, Zwolle, <sup>2</sup>Dept. of Research & Development, Netherlands Comprehensive Cancer Organisation (IKNL), Utrecht, <sup>3</sup>Dept. of Research & Development, Catharina Ziekenhuis, Eindhoven, <sup>4</sup>Dept. of Gastroenterology, Isala, Zwolle, <sup>5</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>6</sup>Dept. of Gastrointestinal Surgery, Isala, Zwolle, Nederland*

**Symposium Werkgroep Bariatrie**

**Brabantzaal**

- Voorzitter: P. Koehestanie en P.R. Oosterwijk
- 14.30 Opening symposium
- 14.35 Gastro-Intestinale Motiliteit na Bariatrische Interventie's  
*Dr. D.P. Hirsch, MDL-arts, Ziekenhuis Rijnstate, Arnhem*
- 15.05 Eerste resultaten van de endoscopische sleeve in Ziekenhuis Rijnstate  
*Dr. M.J.M. Groenen, MDL-arts, Ziekenhuis Rijnstate, Arnhem*
- 15.25 Overzicht van post-bariatrische endoscopie  
*Dr. P. Koehestanie, MDL-arts, Bravis Ziekenhuis, Bergen op Zoom*
- 15.45 Buikpijn: The dark side of bariatric surgery  
*N. van Olst, arts-onderzoeker, Rode Kruis Ziekenhuis, Beverwijk*
- 15.55 Discussie
- 16.00 Koffie-/theepauze in de expositiehal

**Symposium/abstracts IBD II - Beeldvorming IBD**

**Brabantzaal**

- Voorzitter: V.E.R. Asscher en J.F. Brandse
- Voordrachten in het Nederlands, 5 minuten presentatie en 3 minuten discussie*
- 16.30 Intestinal ultrasound identifies histopathological appendiceal inflammation in ulcerative colitis  
*M.J. Pruijt<sup>1</sup>, E. Visser<sup>2</sup>, F.A.E. de Voogd<sup>1</sup>, M.A. Reijntjes<sup>2</sup>, W.A. Bemelman<sup>2</sup>, G.R.A.M. D'Haens<sup>1</sup>, A. Mookhoek<sup>3</sup>, C.J. Buskens<sup>2</sup>, K.B. Gecse<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, <sup>3</sup>Dept. of Pathology, University of Bern, Bern, Zwitserland*
- 16.38 Motility at cine-MRI in stricturing Crohn's disease patients to evaluate stricture composition  
*K.J. Beek<sup>1</sup>, K.L. van Rijn<sup>1</sup>, C.S. de Jonge<sup>1</sup>, F.A.E. de Voogd<sup>2</sup>, C.J. Buskens<sup>3</sup>, A. Mookhoek<sup>4</sup>, E.A. Neeffjes-Borst<sup>5</sup>, K. Horsthuis<sup>1</sup>, J.A.W. Tielbeek<sup>6</sup>, G.R.A.M. D'Haens<sup>2</sup>, K.B. Gecse<sup>2</sup>, J. Stoker<sup>1</sup>, <sup>1</sup>Dept. of Radiology and Nuclear Medicine, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>3</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, <sup>4</sup>Dept. of Pathology, University of Bern, Bern, Zwitserland, <sup>5</sup>Dept. of Pathology, Amsterdam UMC, Amsterdam, <sup>6</sup>Dept. of Radiology and Nuclear Medicine, Spaarne Gasthuis, Haarlem, Nederland*

- 16.46 "State of the art: Anastomose IBD? 'De ene anastomose is de andere niet': Ileocoecaal naden, Kono-S en Pouch reconstructies voor de MDL arts"  
*J.K. Wiggers, fellow chirurgie, Amsterdam UMC*
- 17.22 Fistula drainage assessment is correlated with improvement in Quality of Life after 26 weeks of treatment in perianal fistulizing Crohn's disease  
*L.G.M. Mulders<sup>1</sup>, K.J. Beek<sup>2</sup>, J.A.W. Tielbeek<sup>3</sup>, C.J. Buskens<sup>4</sup>, J. Stoker<sup>2</sup>, R.A. van Hulst<sup>5</sup>, G.R.A.M. D'Haens<sup>1</sup>, K.B. Gecse<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Radiology and Nuclear Medicine, Amsterdam UMC, Amsterdam, <sup>3</sup>Dept. of Radiology and Nuclear Medicine, Spaarne Gasthuis, Haarlem, <sup>4</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, <sup>5</sup>Dept. of Anesthesiology, Amsterdam UMC, Amsterdam, Nederland*

**Top abstracts NVGE**

**Brabantzaal**

Voorzitters: A.E. van der Meulen en P.P.J. van der Veek

- 17.30 Three-year oncological outcomes of endoscopic full-thickness resection for scar excision after incomplete removal of low-risk T1 colorectal cancer: results from the Dutch nationwide prospective eFTR registry  
*S.C. Albers<sup>1,2,3</sup>, L.W. Zwager<sup>1</sup>, F.C. Bekkering<sup>4</sup>, J.J. Boonstra<sup>5</sup>, F. ter Borg<sup>6</sup>, P. Fockens<sup>1</sup>, E.A.R. Gielisse<sup>7</sup>, M. Houben<sup>8</sup>, W.R. ten Hove<sup>9</sup>, W.B. Nagengast<sup>10</sup>, L.E. Perk<sup>11</sup>, F.J. Rando Munoz<sup>12</sup>, R.M. Schreuder<sup>13</sup>, M.P. Schwartz<sup>14</sup>, H. van der Sluis<sup>15</sup>, B.W. van der Spek<sup>16</sup>, J.S. Terhaar sive Droste<sup>17</sup>, M.S. Vlug<sup>18</sup>, B. Weusten<sup>19</sup>, C. Wientjes<sup>20</sup>, T.R. de Wijkerslooth<sup>21</sup>, A. Fariña Sarasqueta<sup>22</sup>, E. Dekker<sup>1</sup>, B.A.J. Bastiaansen<sup>23</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Cancer Center, Amsterdam, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Amsterdam Gastroenterology Endocrinology Metabolism, Amsterdam, <sup>4</sup>Dept. of Gastroenterology and Hepatology, IJsselland Ziekenhuis, Capelle aan den IJssel, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Deventer Hospital, Deventer, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Rode Kruis Ziekenhuis, Beverwijk, <sup>8</sup>Dept. of Gastroenterology and Hepatology, Hagaziekenhuis, Den Haag, <sup>9</sup>Dept. of Gastroenterology and Hepatology, Alrijne Ziekenhuis, Leiderdorp, <sup>10</sup>Dept. of Gastroenterology and Hepatology, UMC Groningen, Groningen, <sup>11</sup>Dept. of Gastroenterology and Hepatology, Haaglanden Medisch Centrum, Den Haag, <sup>12</sup>Dept. of Gastroenterology and Hepatology, Nij Smellinghe Hospital, Drachten, <sup>13</sup>Dept. of Gastroenterology and Hepatology, Catharina Ziekenhuis, Eindhoven, <sup>14</sup>Dept. of Gastroenterology and Hepatology, Meander Medisch Centrum, Amersfoort, <sup>15</sup>Dept. of Gastroenterology and Hepatology, Isala, Zwolle, <sup>16</sup>Dept. of Gastroenterology and Hepatology, Noordwest Ziekenhuisgroep, Alkmaar, <sup>17</sup>Dept. of Gastroenterology and Hepatology, Jeroen Bosch Ziekenhuis, Den Bosch, <sup>18</sup>Dept. of Gastroenterology and Hepatology, Dijklander Ziekenhuis, Hoorn, <sup>19</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>20</sup>Dept. of Gastroenterology and Hepatology, OLVG, Amsterdam, <sup>21</sup>Dept. of Gastroenterology and Hepatology, Antoni van Leeuwenhoek Ziekenhuis, Amsterdam, <sup>22</sup>Dept. of Pathology, Amsterdam UMC, Amsterdam, <sup>23</sup>Dept. of Gastroenterology, Amsterdam UMC, Amsterdam, Nederland*
- 17.38 Risk factor targeted perioperative care reduces anastomotic leakage after colorectal surgery: the DoubleCheck study  
*A. de Wit<sup>1,2</sup>, B.T. Bootsma<sup>1,2</sup>, D.E. Huisman<sup>1,2</sup>, B. van Wely<sup>3</sup>, M.J. van Hoogstraten<sup>3</sup>, D.J.A. Sonneveld<sup>4</sup>, D. Moes<sup>4</sup>, J.A. Wegdam<sup>5</sup>, C.V. Feo<sup>6</sup>, E.G.G. Verdaasdonk<sup>7</sup>, W.J.A. Brokelman<sup>7</sup>, D.W.J. ten Cate<sup>8</sup>, T. Lubbers<sup>9</sup>, E. Lagae<sup>10</sup>, D.J.G.H. Roks<sup>10</sup>, G. Kazemier<sup>1,2</sup>, J. Stens<sup>11</sup>, G.D.*

Slooter<sup>8</sup>, F. Daams<sup>1, 2</sup>, <sup>1</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Surgery, Cancer Center, Amsterdam, <sup>3</sup>Dept. of Surgery, Bernhoven Ziekenhuis, Uden, <sup>4</sup>Dept. of Surgery, Dijklander Ziekenhuis, Hoorn, <sup>5</sup>Dept. of Surgery, Elkerliek Ziekenhuis, Helmond, <sup>6</sup>Dept. of Surgery, Ospedale del Delta, Ferrara, Italië, <sup>7</sup>Dept. of Surgery, Jeroen Bosch Ziekenhuis, Den Bosch, <sup>8</sup>Dept. of Surgery, Maxima Medisch Centrum, Veldhoven, <sup>9</sup>Dept. of Surgery, MUMC+, Maastricht, <sup>10</sup>Dept. of Surgery, ZorgSaam Ziekenhuis, Terneuzen, <sup>11</sup>Dept. of Anesthesiology, Medisch Centrum Leeuwarden, Leeuwarden, Nederland

17.46

**Dietary factors associated with the progression of gastric intestinal metaplasia: a multicenter, prospective cohort study.**

N.E.A. Kapteijn<sup>1</sup>, F.E. Marijnissen<sup>1</sup>, S. Pluimers<sup>1</sup>, X. Guo<sup>1</sup>, W.J. den Hollander<sup>5</sup>, I.L. Holster<sup>2</sup>, C.M. den Hoed<sup>1</sup>, L.G. Capelle<sup>3</sup>, T.J. Tang<sup>1</sup>, M. Anten<sup>4</sup>, I. Prytz-Berset<sup>6</sup>, E.M. Witteman<sup>7</sup>, F. ter Borg<sup>8</sup>, J.P.W. Burger<sup>9</sup>, G.M. Fuhler<sup>1</sup>, M.P. Peppelenbosch<sup>1</sup>, M. Doukas<sup>1</sup>, E.J. Kuipers<sup>1</sup>, J. Honing<sup>1</sup>, M.C.W. Spaander<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Maasstad Ziekenhuis, Rotterdam, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Meander Medisch Centrum, Amersfoort, <sup>4</sup>Dept. of Gastroenterology and Hepatology, St. Franciscus Gasthuis & Vlietland, Rotterdam, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Arijne Ziekenhuis, Leiderdorp, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Helse, Møre og Romsdal, Noorwegen, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Catharina Ziekenhuis, Nijmegen, <sup>8</sup>Dept. of Gastroenterology and Hepatology, Deventer Ziekenhuis, Deventer, <sup>9</sup>Dept. of Gastroenterology and Hepatology Ziekenhuis Rijnstate, Arnhem

17.54

**Use of ursodeoxycholic acid can be optimized in a nationwide cohort of patients with primary biliary cholangitis**

E. Werner<sup>1</sup>, M.C.B. van Hooff<sup>1</sup>, M.A. van de Vrie<sup>1</sup>, G.H.X. Weijsters<sup>1</sup>, R.C. de Veer<sup>1</sup>, U. Beuers<sup>2</sup>, J.P.H. Drenth<sup>2</sup>, F.J.C. Cuperus<sup>3</sup>, B. van Hoek<sup>4</sup>, B.J. Veldt<sup>5</sup>, M. Klemt-Kropp<sup>6</sup>, S. van Meer<sup>7</sup>, R.C. Verdonk<sup>8</sup>, H.J. Flink<sup>9</sup>, J.M. Vrolijk<sup>10</sup>, T.J.G. Gevers<sup>11</sup>, C.Y. Ponsioen<sup>2</sup>, K. Boonstra<sup>12</sup>, F. Boersma<sup>13</sup>, H.J.M. de Jonge<sup>14</sup>, F.H.J. Wolfhagen<sup>15</sup>, L.C. Baak<sup>16</sup>, S.L. Onderwater<sup>17</sup>, J.D. van Bergeijk<sup>18</sup>, P.G. van Putten<sup>19</sup>, G.J. de Bruin<sup>20</sup>, R.P.R. Adang<sup>21</sup>, M.N. Aparicio-Pages<sup>22</sup>, W. de Boer<sup>23</sup>, F. ter Borg<sup>24</sup>, H. van Soest<sup>25</sup>, E.S. de Vries<sup>26</sup>, H.L.A. Janssen<sup>1, 27</sup>, BE Hansen<sup>28</sup>, NS Eler<sup>28</sup>, AJ Van Der Meer<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>3</sup>Dept. of Gastroenterology and Hepatology, UMC Groningen, Groningen, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Reinier de Graaf Gasthuis, Delft, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Noordwest Ziekenhuisgroep, Alkmaar, <sup>7</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>8</sup>Dept. of Gastroenterology and Hepatology, St. Antonius Ziekenhuis, Nieuwegein, <sup>9</sup>Dept. of Gastroenterology and Hepatology, Catharina Ziekenhuis, Eindhoven, <sup>10</sup>Dept. of Gastroenterology and Hepatology, Rijnstate Ziekenhuis, Arnhem, <sup>11</sup>Dept. of Gastroenterology and Hepatology, MUMC+, Maastricht, <sup>12</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, <sup>13</sup>Dept. of Gastroenterology and Hepatology, Gelre Hospitals, Apeldoorn-Zutphen, <sup>14</sup>Dept. of Gastroenterology and Hepatology, Jeroen Bosch Ziekenhuis, Den Bosch, <sup>15</sup>Dept. of Gastroenterology and Hepatology, Albert Schweitzer Ziekenhuis, Dordrecht, <sup>16</sup>Dept. of Gastroenterology and Hepatology, OLVG, Amsterdam, <sup>17</sup>Dept. of Gastroenterology and Hepatology, Diakonessenhuis, Utrecht, <sup>18</sup>Dept. of Gastroenterology and Hepatology, Ziekenhuis Gelderse Vallei, Ede, <sup>19</sup>Dept. of Gastroenterology and Hepatology, Medisch Centrum Leeuwarden, Leeuwarden, <sup>20</sup>Dept. of Gastroenterology and Hepatology, Tergooi MC, Hilversum, <sup>21</sup>Dept. of Gastroenterology and Hepatology, VieCuri, Venlo, <sup>22</sup>Dept. of Gastroenterology and Hepatology, Canisius/Wilhemina Hospital, Nijmegen, <sup>23</sup>Dept. of Gastroenterology and Hepatology, Bernhoven Ziekenhuis, Uden, <sup>24</sup>Dept. of Gastroenterology and Hepatology, Deventer Hospital, Deventer, <sup>25</sup>Dept. of Gastroenterology and Hepatology,

WOENSDAG 11 SEPTEMBER 2024

*Haaglanden Medisch Centrum, Den Haag, <sup>26</sup>Dept. of Gastroenterology and Hepatology, Isala, Zwolle, <sup>27</sup>Dept. of Gastroenterology and Hepatology, Toronto Centre for Liver Disease, Toronto, Canada, <sup>28</sup>Dept. of Epidemiology and Biostatistics, Erasmus MC, Rotterdam, Nederland*

- 18.02      **Uitreiking NVGE Researchprijs 2024**
- 18.05      **Voordracht winnaar Gastrostart vervolgsubsidie**
- 18.15      Einde van deze sessie



WOENSDAG 11 SEPTEMBER 2024

### Symposium NVH - Richtlijn HCC

Auditorium

Voorzitters: *M.J. Coenraad en M.J. Sonneveld*

- 9.30 Epidemiologie en HCC surveillance  
*Dr. S. van Meer, MDL-arts, UMC Utrecht*
- 9.45 Lokale behandeling van HCC (Ablatie/TACE/TARE)  
*Dr. C. van der Leij, interventieradioloog, MUMC, Maastricht*
- 10.00 Rol van Stereotactische RT in behandeling van HCC  
*Dr. A. Méndez Romero, radiotherapeut, Erasmus MC, Rotterdam*
- 10.15 Chirurgische behandeling van HCC  
*Dr. A.E. Braat, chirurg, LUMC, Leiden*
- 10.30 Systemische / palliatieve behandeling van HCC  
*Dr. N. Haj Mohammad, internist-oncoloog, UMC Utrecht*
- 10.45 Koffie-/theepauze in de expositiehal

### Abstractsessie Oncologie/NVGIC

Auditorium

Voorzitter: *C.M.C. le Clercq en W.M.U. van Grevenstein*

*Voordrachten in het Nederlands, 5 minuten presentatie en 3 minuten discussie*

- 13.30 Hybride benadering van colon neoplasie: de toekomst van de endoscopisch geassisteerde laparoscopische wigresectie  
*Dr. H.L. van Westreenen, chirurg, Isala, Zwolle, Nederland*
- 13.50 Added value of adjuvant chemotherapy in T1-2 node-positive colon cancer patients  
*J. Hanevelt<sup>1</sup>, J.W.B. de Groot<sup>2</sup>, E. Rademaker<sup>3</sup>, B. Zamaray<sup>3</sup>, R.M. Brohet<sup>4</sup>, E.C.J. Consten<sup>5, 6</sup>, P.J. Tanis<sup>7</sup>, L.M.G. Moons<sup>8</sup>, F.P. Vleggaar<sup>8</sup>, H.L. van Westreenen<sup>9</sup>, W.H. de Vos Tot Nederveen Cappell<sup>10</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Isala, Zwolle, <sup>2</sup>Dept. of Medical Oncology, Isala, Zwolle, <sup>3</sup>Dept. of Surgery, Isala, Zwolle, <sup>4</sup>Dept. of Epidemiology and Biostatistics, Isala, Zwolle, <sup>5</sup>Dept. of Gastrointestinal Surgery, UMC Groningen, Groningen, <sup>6</sup>Dept. of Gastrointestinal Surgery, Meander Medisch Centrum, Amersfoort, <sup>7</sup>Dept. of Gastrointestinal Surgery, Erasmus MC, Rotterdam, <sup>8</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>9</sup>Dept. of Gastrointestinal Surgery, Isala, Zwolle, <sup>10</sup>Dept. of Gastroenterology, Isala, Zwolle, Nederland*
- 13.58 Semiflex assisted vacuum therapy for perianal abscesses/sinuses and fistula: study protocol for a pilot study  
*A.J.M. Pronk<sup>1</sup>, E.M. Meima-van Praag<sup>1</sup>, <sup>1</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, Nederland*

- 14.06 An Expert Delphi Consensus: Early identification of Patients at Risk of Crohn's Disease in Perianal Fistulas and Abscesses (PREFAB) and identification and management of Isolated Perianal Crohn's Disease (ipCD) - Part A, PREFAB  
*L.J. Munster<sup>1, 2</sup>, L.N. Hanna<sup>3</sup>, A. Dige<sup>4</sup>, L. Lundby<sup>5</sup>, A.L. Hart<sup>3</sup>, C.J. Buskens<sup>6</sup>, P.J. Tozer<sup>7</sup>, J.D.W. van der Bilt<sup>1, 2</sup>, <sup>1</sup>Dept. of Surgery, Flevoziekenhuis, Almere, <sup>2</sup>Dept. of Surgery, Amsterdam UMC, locatie VUMC, Amsterdam, <sup>3</sup>Dept. of Gastroenterology and Hepatology, St. Marks Hospital, London, Verenigd Koninkrijk, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Aarhus University Hospital, Aarhus, Denemarken, <sup>5</sup>Dept. of Surgery, Aarhus University Hospital, Aarhus, Denemarken, <sup>6</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, <sup>7</sup>Dept. of Surgery, St. Marks Hospital, London, Verenigd Koninkrijk*
- 14.14 Protein n-glycosylation traits can accurately distinguish pancreatic cancer cases from a heterogeneous group of controls  
*A.M. Bogdanski<sup>1, 2</sup>, D.C.F. Klatter<sup>1, 2</sup>, Y. Bi<sup>3</sup>, K.E. Clift<sup>2</sup>, J.E. van Hooft<sup>1</sup>, M.E. van Leerdam<sup>1, 4</sup>, M. Wuhler<sup>5</sup>, M.B. Wallace<sup>3</sup>, Y.E.M. van der Burgt<sup>5</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Mayo Clinic, Jacksonville, Verenigde Staten, <sup>3</sup>Dept. of Internal Medicine, Division of Gastroenterology and Hepatology, Mayo Clinic, Jacksonville, Verenigde Staten, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Antoni van Leeuwenhoek - Nederlands Kanker Instituut, Amsterdam, <sup>5</sup>Center for Proteomics and Metabolomics, Leids Universitair Medisch Centrum, Leiden, Nederland*
- 14.22 The additional value of cervical ultrasound in the detection of cervical lymph node metastases in patients with esophageal cancer; is it too soon to remove it from the standard diagnostic workup?  
*J.R. van Doesburg<sup>1</sup>, N. Schuring<sup>1</sup>, M.H.M. Vries<sup>2</sup>, P. Duvivier<sup>2</sup>, P. de Graaf<sup>2</sup>, F. Daams<sup>1, 3</sup>, M.I. van Berge Henegouwen<sup>1, 3</sup>, S.S. Gisbertz<sup>1</sup>, <sup>1</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Radiology, Amsterdam UMC, Amsterdam, <sup>3</sup>Dept. of Surgery, Cancer Center, Amsterdam, Nederland*

## Symposium Groene MDL

## Auditorium

Voorzitters: *F. Dirksmeier-Harinck en E.P.M. van der Zanden*

- 14.30 Pro-contra sessie over plantaardige voeding in het ziekenhuis  
*Dr. R. Quispel, MDL-arts, Reinier de Graaf Gasthuis, Delft  
 Dr. P.W.J. Maljaars, MDL-arts, LUMC, Leiden*
- 15.15 Mogelijkheden om het BVO CRC te verduurzamen  
*Dr. J. Terhaar Sive Droste, MDL-arts, Jeroen Bosch Ziekenhuis, 's-Hertogenbosch*
- 15.45 Tips voor het verduurzamen van uw endoscopie-afdeling  
*E.P.M. van der Zanden, MDL-arts, Amstelland Ziekenhuis, Amstelveen*
- 16.00 Koffie-/theepauze in de expositiehal

Voorzitters: *H. van Soest*

**Titel: Het aanjagen van vroegsignalering alcoholproblematiek onder patiënten door zorgprofessionals**

16.30 Hoe staat het met de kennis, houding, intentie en het huidige gedrag in vroegsignalering onder zorgprofessionals?

*A. Esselink, junior onderzoeker, Tranzo/Tilburg University, Tilburg*

16.50 Het activeren van zorgprofessionals, in gesprek met

*Dr. R.B. Takkenberg, MDL-arts, Amsterdam UMC*

*Dr. M. de Rond, beleidsadviseur, KNMG, Utrecht*

*J. Bisschop, projectleider alcohol, Jeroen Bosch Ziekenhuis, Den Bosch*

*A. Esselink, junior onderzoeker, Tranzo/Tilburg University, Tilburg*

*Dr. R. Bovens, Tranzo, Tilburg University, wvd. Projectleider werkgroep 2e lijn en lid Adviesraad van het Samenwerkingsverband Vroegsignalering Alcoholproblematiek (SVA); en een zorgprofessional van de SEH van het Jeroen Bosch-Ziekenhuis.*

**Career Event NVMDL i.o.**

**Baroniezaal**

Voorzitters: D. Wintjens en M. Struyvenberg

09.30

**College Tour MDL**

J.M. Jansen, MDL-arts, OLVG, Amsterdam  
 Prof. dr. W.B. Nagengast, MDL-arts, UMC Groningen  
 Dr. S. Darwish Murad, MDL-arts, Erasmus MC, Rotterdam

10.45

Koffie-/theepauze in de expositiehal

**Abstractsessie Nederlandse Vereniging voor Hepatologie**

**Baroniezaal**

Voorzitters: S. van Meer en M.J. Sonneveld

*Voordrachten in het Nederlands, 5 minuten presentatie en 3 minuten discussie*

13.30

**Prediction of hepatocellular carcinoma and liver-related events in anti-HDV positive individuals, an international retrospective cohort study (RIDE)**

L.A. Patmore<sup>1</sup>, M. Spaan<sup>1</sup>, K. Agarwal<sup>2</sup>, O.M. Koc<sup>3</sup>, H. Blokzijl<sup>4</sup>, S. Brouwer<sup>5</sup>, H. van Soest<sup>6</sup>, A.G.W. van Hulzen<sup>7</sup>, H.L.A. Janssen<sup>1,8</sup>, A.J.J. Lammers<sup>9</sup>, L. Jansen<sup>10</sup>, M.A.A. Claassen<sup>11</sup>, R.A. de Man<sup>1</sup>, R.B. Takkenberg<sup>12</sup>, R. van Dijk<sup>13</sup>, D. Posthouwer<sup>14</sup>, J. Reijnders<sup>1,5</sup>, I. Carey<sup>15</sup>, M.J. Sonneveld<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, King's college Hospital, Londen, Verenigd Koninkrijk, <sup>3</sup>Dept. of Gastroenterology and Hepatology, MUMC+, Maastricht, <sup>4</sup>Dept. of Gastroenterology and Hepatology, UMC Groningen, Groningen, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Hagaziekenhuis, Den Haag, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Haaglanden Medisch Centrum, Den Haag, <sup>7</sup>Dept. of Internal Medicine, Isala, Zwolle, <sup>8</sup>Dept. of Gastroenterology and Hepatology, Toronto Centre for Liver Disease, Toronto, Canada, <sup>9</sup>Dept. of Infectious Diseases and Immunology, Isala, Zwolle, <sup>10</sup>Dept. of Gastroenterology and Hepatology, OLVG, Amsterdam, <sup>11</sup>Dept. of Internal Medicine, Rijnstate Ziekenhuis, Arnhem, <sup>12</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>13</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>14</sup>Dept. of Internal Medicine, MUMC+, Maastricht, <sup>15</sup>Dept. of Gastroenterology and Hepatology, King's College Hospital, Londen, Verenigd Koninkrijk

13.38

**Low number needed to screen to detected advanced MASLD-fibrosis across the lines of care**

K.C. van Son<sup>1</sup>, S. Driessen<sup>2</sup>, J.P.H. Drenth<sup>1</sup>, A.G. Holleboom<sup>2</sup>, M.E. Tushuizen<sup>3</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Vascular Medicine, Amsterdam UMC, Amsterdam, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, Nederland

- 13.46 **Rifaximin reduces healthcare utilization but not overall costs in patients with cirrhosis and recurrent episodes of hepatic encephalopathy.**  
*D.J. van Doorn<sup>1</sup>, K.M.A. van Eekhout<sup>1</sup>, K. de Wit<sup>1</sup>, L.C. Baak<sup>2</sup>, M. Klemt-Kropp<sup>3</sup>, B. Verwer<sup>4</sup>, P.W. Friederich<sup>5</sup>, G.J. de Bruin<sup>6</sup>, X.G. Vos<sup>7</sup>, J.P.H. Drenth<sup>1</sup>, R.B. Takkenberg<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, OLVG, Amsterdam, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Noordwest Ziekenhuisgroep, Alkmaar, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Spaarne Gasthuis, Haarlem, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Meander Medisch Centrum, Amersfoort, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Tergooi MC, Hilversum, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Dijklander Ziekenhuis, Hoorn, Nederland*
- 13.54 **Differential prevalence and prognostic value of metabolic syndrome components among metabolic-dysfunction associated steatotic liver disease (MASLD) patients**  
*J. Pustjens<sup>1</sup>, R.J. de Knecht<sup>1</sup>, H.L.A. Janssen<sup>1, 2</sup>, W.P. Brouwer<sup>3</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Toronto Centre for Liver Disease, Toronto, Canada, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC University Medical Center, Rotterdam, Nederland*
- 14.02 **Gut microbiome dysbiosis is not associated with the presence of portal vein thrombosis in patients with end-stage liver disease.**  
*R.R. Aleksandrova<sup>1</sup>, L.M. Nieuwenhuis<sup>1</sup>, N. Karmi<sup>2</sup>, S. Zhang<sup>2</sup>, J.C. Swarte<sup>3</sup>, J.R. Björk<sup>2</sup>, R. Gacesa<sup>2</sup>, H. Blokzijl<sup>4</sup>, R.K. Weersma<sup>2</sup>, J.A. Lisman<sup>5</sup>, E.A.M. Festen<sup>2</sup>, V.E. de Meijer<sup>1</sup>, <sup>1</sup>Dept. of Surgery, Division of HPB & Transplant Surgery, University of Groningen, University Medical Center Groningen, Groningen, <sup>2</sup>Dept. of Gastroenterology and Hepatology, University of Groningen, University Medical Center Groningen, Groningen, <sup>3</sup>Dept. of Internal Medicine, University of Groningen, University Medical Center Groningen, Groningen, <sup>4</sup>Dept. of Gastroenterology and Hepatology, UMC Groningen, Groningen, <sup>5</sup>Dept. of Surgery, University of Groningen, University Medical Center Groningen, Groningen, Nederland*
- 14.10 **Rhesus antagonism is associated with higher rates of non-anastomotic strictures following orthotopic liver transplantation in patients receiving donation after brain death: a single-center, retrospective cohort study**  
*L.D. Broekman<sup>1</sup>, D. van der Helm<sup>2</sup>, M.E. Tushuizen<sup>1</sup>, B. van Hoek<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>2</sup>Dept. of Surgery, Division of HPB & Transplant Surgery, Leids Universitair Medisch Centrum, Leiden, Nederland*
- 14.18 **Longitudinal changes in liver stiffness measurements in a population-based screening cohort of 5,517 participants**  
*J. Pustjens<sup>1</sup>, L.A. van Kleef<sup>1</sup>, R.J. de Knecht<sup>1</sup>, H.L.A. Janssen<sup>1, 2</sup>, W.P. Brouwer<sup>3</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Toronto Centre for Liver Disease, Toronto, Canada, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC University Medical Center, Rotterdam, Nederland*
- 14.26 **Diagnosis of patients with fibrolamellar carcinoma: a Dutch nationwide study**  
*A. Furumaya<sup>1</sup>, A. Gumedde<sup>1</sup>, J. de Vos-Geelen<sup>2</sup>, V. Weeda<sup>3</sup>, J. Erdmann<sup>1</sup>, R.B. Takkenberg<sup>4</sup>, M. Doukas<sup>5</sup>, J. Verheij<sup>6</sup>, <sup>1</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Gastrointestinal Oncology, MUMC+, Maastricht, <sup>3</sup>Dept. of Surgery, UZ Brussels, Brussel, België, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>5</sup>Dept. of Pathology, Erasmus MC, Rotterdam, <sup>6</sup>Dept. of Pathology, Amsterdam UMC, Amsterdam, Nederland*

WOENSDAG 11 SEPTEMBER 2024

- 14.34 Stereotactic body radiation therapy in early-stage hepatocellular carcinoma: a systematic review and meta-analysis  
*J. de Bruijne<sup>1</sup>, J.K. van Vulpen<sup>2</sup>, S. van Meer<sup>1</sup>, C.J.R. Verstraete<sup>1</sup>, J. Hagendoorn<sup>3</sup>, M.G.E.H. Lam<sup>4</sup>, N. Haj Mohammad<sup>5</sup>, M.L.J. Smits<sup>6</sup>, M.N.G.J.A. Braat<sup>6</sup>, M.P.W. Intven<sup>2</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>2</sup>Dept. of Radiotherapy, UMC Utrecht, Utrecht, <sup>3</sup>Dept. of Surgery, UMC Utrecht, Utrecht, <sup>4</sup>Dept. of Radiology and Nuclear Medicine, UMC Utrecht, Utrecht, <sup>5</sup>Dept. of Medical Oncology, UMC Utrecht, Utrecht, <sup>6</sup>Dept. of Radiology, UMC Utrecht, Utrecht, Nederland*
- 14.42 Algemene ledenvergadering NVH
- 16.00 Koffie-/theepauze in de expositiehal

**Meet the expert NVGIC**

**Zaal 80**

Voorzitter: *W.M.U. van Grevenstein*

**Titel: Data en toekomst van robot UGI chirurgie in Nederland**

09.30 *Deze sessie - waarvoor tevoren moet worden ingeschreven - wordt verzorgd door:  
Prof. dr. J.P. Ruurda, chirurg, UMC Utrecht  
Dr. M. Visser, arts-onderzoeker, Dica, Utrecht*

10.45 Koffie-/thee pauze in de expositiehal

**Seniorenprogramma**

**Zaal 80**

Voorzitters: *J.F.W.M. Bartelsman en H.P.M. Festen*

13.00 Goud van oud  
"En de boer hij zaaide voort deel 2"  
Nieuwe ontwikkelingen in de MDL in de afgelopen 2 jaar  
*Em. prof. dr. G.N.J. Tytgat*

13.30 In de voetsporen van  
"Less is more in endoscopy"  
*Dr. S.N. van Munster, aios MDL, St. Antonius Ziekenhuis, Nieuwegein*

14.00 Meer dan geneeskunde  
"GeneesKUNST"  
*Dr. P. Netten, decaan medische opleidingen, Jeroen Bosch Ziekenhuis, Den Bosch*

14.30 Einde programma en evt. aansluiten bij programma in diverse zalen

17.30 Plenaire sessie in de Brabantzaal

18.15 Borrel en diner

Moderator: H. van Soest

- 12.40 Evaluation of an improved computer-aided detection system for Barrett's neoplasia on real-word imaging conditions  
*R.A.H. van Eijck van Heslinga<sup>1</sup>, M.R. Jong<sup>1</sup>, C. Kusters<sup>2</sup>, T. Boers<sup>2</sup>, J. van der Putten<sup>3</sup>, L. Duits<sup>1</sup>, R. Pouw<sup>1</sup>, B. Weusten<sup>4</sup>, M. Houben<sup>5</sup>, A. Alkhalaf<sup>6</sup>, F. van der Sommen<sup>3</sup>, P. de With<sup>3</sup>, J. de Groof<sup>1</sup>, J.J. Bergman<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Electrical Engineering, Eindhoven University of Technology, Eindhoven, <sup>3</sup>Dept. of Electrical Engineering, Eindhoven University of Technology, Eindhoven, <sup>4</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Hagaziekenhuis, Den Haag, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Isala, Zwolle, Nederland*
- 12.45 Application of EUS or MRCP prior to ERCP in patients with suspected choledocholithiasis in clinical practice  
*M.J.P. de Jong<sup>1</sup>, M.M.L. Engels<sup>2</sup>, C.J. Sperna Weiland<sup>3</sup>, R. Krol<sup>4</sup>, T.M. Bisseling<sup>1</sup>, E.J.M. van Geenen<sup>1</sup>, P.D. Siersema<sup>5, 6</sup>, F. van Delft<sup>1</sup>, J.E. van Hooft<sup>2</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Jeroen Bosch Ziekenhuis, Den Bosch, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Maasziekenhuis Pantein, Beugen, <sup>5</sup>Dept. of Gastroenterology, Erasmus MC, Rotterdam, <sup>6</sup>Dept. of Gastroenterology, Radboudumc, Nijmegen, Nederland*
- 12.50 Next-generation IgA-SEQ allows for high-throughput, anaerobic and metagenomic assessment of IgA-coated bacteria  
*M. van Gogh<sup>1</sup>, J.M. Louwers<sup>2</sup>, A. Celli<sup>1</sup>, S. Gräve<sup>1</sup>, M.C. Viveen<sup>1</sup>, J. Top<sup>1</sup>, S. Bosch<sup>3</sup>, K.H.N. de Boer<sup>3</sup>, E.C. Brand<sup>2</sup>, B. Oldenburg<sup>2</sup>, M.R. de Zoete<sup>1</sup>, <sup>1</sup>Dept. of Medical Microbiology, UMC Utrecht, Utrecht, <sup>2</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, Nederland*
- 12.55 Liver enzyme alterations during pregnancy in patients with inflammatory bowel disease  
*D.G. Bouwknegt<sup>1</sup>, H.C. Donker<sup>2</sup>, B. van Es<sup>3, 4</sup>, G. Dijkstra<sup>1</sup>, W.A. van Dop<sup>5</sup>, J.R. Prins<sup>6</sup>, T. Tauber<sup>4</sup>, C.J. van der Woude<sup>7</sup>, M.C. Visschedijk<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, UMC Groningen, Groningen, <sup>2</sup>Dept. of Epidemiology, UMC Groningen, Groningen, <sup>3</sup>Dept. of Biomedical Data Sciences, UMC Utrecht, Utrecht, <sup>4</sup>Dept. of Biomedical Data Sciences, MedxAI, Amsterdam, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, <sup>6</sup>Dept. of Obstetrics and Gynecology, UMC Groningen, Groningen, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, Nederland*

- 13.00 Persistent risk of hepatocellular carcinoma despite improvement of liver stiffness in chronic hepatitis B patients with advanced fibrosis treated with nucleo(s)tide analogues – an international retrospective cohort study  
*L.A. Patmore<sup>1</sup>, L.Y. Liang<sup>2</sup>, G. Papatheodoridis<sup>3</sup>, M. Kilany<sup>4</sup>, A. Furquim D’Almeida<sup>5</sup>, V.W.S. Wong<sup>6</sup>, M. Papatheodoridi<sup>3</sup>, T. Vanwolleghem<sup>5</sup>, P. Honkoop<sup>7</sup>, H. Blokzijl<sup>8</sup>, O.M. Koc<sup>9</sup>, H.L.A. Janssen<sup>1,4</sup>, M. Kramer<sup>9</sup>, J. de Bruijne<sup>10</sup>, A. Kaewdech<sup>11</sup>, R.A. de Man<sup>1</sup>, R.B. Takkenberg<sup>12</sup>, G.L. Wong<sup>13</sup>, J.J. Feld<sup>4</sup>, M.J. Sonneveld<sup>1</sup>*, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>2</sup>Dept. of Medical Statistics, He Chinese University of Hong Kong, Hong Kong SAR, Hongkong, <sup>3</sup>Dept. of Gastroenterology and Hepatology, National and Kapodistrian University of Athens, Laiko General Hospital Athens, Athene, Griekenland, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Toronto Centre for Liver Disease, Toronto, Canada, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Antwerp University Hospital, Antwerpen, België, <sup>6</sup>Dept. of Medicine, He Chinese University of Hong Kong, Hong Kong SAR, Hongkong, Hongkong, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Albert Schweitzer Ziekenhuis, Dordrecht, <sup>8</sup>Dept. of Gastroenterology and Hepatology, UMC Groningen, Groningen, <sup>9</sup>Dept. of Gastroenterology and Hepatology, MUMC+, Maastricht, <sup>10</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>11</sup>Dept. of Gastroenterology and Hepatology, Prince of Songkla University, Hatyai, Thailand, <sup>12</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>13</sup>Dept. of Gastroenterology and Hepatology, He Chinese University of Hong Kong, Hong Kong SAR, Hongkong
- 13.05 MASLD and metALD: the amount of liver fat and number of cardiometabolic risk factors in relation to the risk of type 2 diabetes and cardiovascular disease  
*G. Alblas<sup>1</sup>, J.H.P.M. van der Velde<sup>2</sup>, M.E. Tushuizen<sup>3</sup>, J.W. Jukema<sup>4</sup>, H.J. Lamb<sup>5</sup>, F.R. Rosendaal<sup>2</sup>, B. Van Hoek<sup>3</sup>, R. de Mutsert<sup>2</sup>, M.J. Coenraad<sup>3</sup>*, <sup>1</sup>Dept. of Internal Medicine, Leids Universitair Medisch Centrum, Leiden, <sup>2</sup>Dept. of Epidemiology, Leids Universitair Medisch Centrum, Leiden, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>4</sup>Dept. of Cardiology, Leids Universitair Medisch Centrum, Leiden, <sup>5</sup>Dept. of Radiology, Leids Universitair Medisch Centrum, Leiden, Nederland
- 13.10 Body composition parameters derived from diagnostic CT scans are associated with worse overall survival in various groups of patients with pancreatic ductal adenocarcinoma  
*K.J.H. Wijsman<sup>1,2</sup>, D.C.F. Klatter<sup>1,2</sup>, A.M. Bogdanski<sup>1,2</sup>, A.D. Weston<sup>3</sup>, J.E. van Hooft<sup>2</sup>, M.E. van Leerdam<sup>2,4</sup>, M.B. Wallace<sup>5</sup>, Y. Bi<sup>5</sup>*, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Mayo Clinic, Jacksonville, Verenigde Staten, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>3</sup>Dept. of Biomedical Data Sciences, Mayo Clinic, Jacksonville, Verenigde Staten, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Antoni van Leeuwenhoek - Nederlands Kanker Instituut, Amsterdam, <sup>5</sup>Dept. of Internal Medicine, Division of Gastroenterology and Hepatology, Mayo Clinic, Jacksonville, Verenigde Staten



**Symposium Less is more in de GE-chirurgie?**

**Brabantzaal**

Voorzitter: *M. Croon*

- 13.45 Complementerende chirurgie of intensieve follow-up voor het lokaal verwijderd T1 CRC  
*Dr. L.M.G. Moons, MDL-arts, UMC Utrecht*
- 14.15 Stroomlijnen van de zorg voor mensen met choledocholithiasis; Dutch-TIMELINESS  
*T. Weijs, chirurg, UMC Utrecht*
- 14.45 Tijd voor normen in de IBD-chirurgie?  
*Dr. M.C. Richir, chirurg, UMC Utrecht*

**Videosymposium Sectie Gastrointestinale Endoscopie**

**Auditorium**

Voorzitters: *A. Inderson en B.L.A.M. Weusten*

- 8.45 Een programma rond ingezonden endoscopie video's
- 10.15 Koffie-/theepauze in de expositiehal

**Symposium/abstracts IBD III - Nieuwe ontwikkelingen in IBD**

**Auditorium**

Voorzitters: *M.M.C. Hirdes en M.C. Visschedijk*

*Voordrachten in het Nederlands, 5 minuten presentatie en 3 minuten discussie*

- 10.45 Multiplex spatial omics analysis reveals changes in immune-epithelial crosstalk during inflammation and dysplasia development in chronic ibd patients  
*E. Floor<sup>1</sup>, Y. Vercoulen<sup>1</sup>, B. Oldenburg<sup>2</sup>, <sup>1</sup>Center for Experimental Molecular Medicine (CEMM), UMC Utrecht, Utrecht, <sup>2</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, Nederland*
- 10.53 Development and validation of the IBD LIFE questionnaire: a world-wide patient-centred approach  
*J. van Oostrom<sup>1</sup>, S. Anjie<sup>1</sup>, J. Horrigan<sup>2</sup>, N. Karimi<sup>3</sup>, B. Adi<sup>4</sup>, G. Ganesh<sup>4</sup>, S.K. Yang<sup>5</sup>, J. Lasa<sup>6</sup>, L. Parks<sup>6</sup>, C. Broër<sup>7</sup>, A. de Kruijff<sup>8</sup>, P. Olivera<sup>6</sup>, B.D. Ye<sup>5</sup>, R. Banerjee<sup>4</sup>, L. Peyrin-Biroulet<sup>9</sup>, S. Connor<sup>10</sup>, C. Siegel<sup>2</sup>, K.B. Gecse<sup>1</sup>, G.R.A.M. D'Haens<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Dartmouth hitchcock medical center, Lebanon, Verenigde Staten, <sup>3</sup>Dept. of Public Health, South West Sydney Clinical Campuses, UNSW Medicine and Health, UNSW Sydney, Sydney, Australië, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Asian institute of Gastroenterology, Hyderabad, India, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Asan medical center, University of Ulsan College of Medicine, Seoul, Zuid-Korea, <sup>6</sup>Dept. of Gastroenterology and Hepatology, IBD Unit, Gastroenterology Section, Department of Internal Medicine, Centro de E, Buenos Aires, Argentinië, <sup>7</sup>Dept. of Scientific Research, Faculty of Sociology, University of Amsterdam, Amsterdam, <sup>8</sup>Dept. of Scientific Research, Faculty of Science, Methodology and Applied Biostatistics, Free University, Amsterdam, <sup>9</sup>Dept. of Gastroenterology and Hepatology, Department of Gastroenterology, University of Lorraine, CHRU-Nancy, 54000, Nancy,*

DONDERDAG 12 SEPTEMBER 2024

Frankrijk, <sup>10</sup>Dept. of Gastroenterology and Hepatology, South West Sydney Clinical Campuses, UNSW Medicine and Health, UNSW Sydney, Sydney, Australië

11.01 State of the art: Stamceltherapie voor IBD ervaringen uit Nederland  
Dr. H.H. Fidder, MDL-arts, UMC Utrecht

11.37 Capillary self-sampling at home for monitoring of IBD patients: a feasibility study  
G.S. Schuurman<sup>1</sup>, W. T. Groenestege<sup>2</sup>, M.M.C. Hirdes<sup>1</sup>, H.H. Fidder<sup>1</sup>, B. Oldenburg<sup>3</sup>, S. De Rook<sup>4</sup>, F.D.M. van Schaik<sup>3</sup>, <sup>1</sup>Dept. of Gastroenterology, UMC Utrecht, Utrecht, <sup>2</sup>Dept. of Clinical Chemistry, UMC Utrecht, Utrecht, <sup>3</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>4</sup>Dept. of Pediatrics, UMC Utrecht, Utrecht, Nederland

### Symposium Sectie Neurogastroenterologie en Motiliteit: Reflux

Auditorium

Voorzitters: A. Snijkers en I. van Rongen

11.45 Diagnostiek/functieonderzoeken  
N. Warringa, physician assistant, Amsterdam UMC

12.00 Conservatieve behandeling  
Dr. J. Conchillo, MDL-arts, MUMC+, Maastricht

12.15 Chirurgische behandeling  
Dr. W.E. Hueting, chirurg, Alrijne Ziekenhuis, Leiden

12.30 Discussie

12.45 Gemodereerde postersessies in de Meierij Foyer  
Lunch in de expositiehal

### Best of DDD

Auditorium

Voorzitters: A.U.G. van Lent en R.B. Takkenberg

13.45 Tijdens deze sessie zal door de volgende sprekers een wrap up gegeven worden van de sessies in de afgelopen twee dagen:

Best of Oncology – Dr. A.U.G. van Lent, MDL-arts, OLVG, Amsterdam

Best of Endoscopy – Dr. M.J.M. Groenen, MDL-arts, Ziekenhuis Rijnstate, Arnhem

Best of Hepatology – Dr. R.B. Takkenberg, MDL-arts, Amsterdam UMC

15.15 Einde van deze sessie

### Meet the expert

Baroniezaal

Thema: PEC

10.45 Deze sessie – waarvoor tevoren moet worden ingeschreven - wordt verzorgd door:  
Dr. L.P.L. Gilissen, MDL-arts, Catharina Ziekenhuis, Eindhoven

**Meet the expert Arbeidsdeskundige en IBD**

**Baroniezaal**

Voorzitter: *M. Scherpenzeel*

**Titel: Agenderen van werk en IBD in de spreekkamer**

11.45 Ervaringsverhaal patiënt  
*N. Jannink, IBD Patiënt*

11.55 Belang van werk bij chronisch zieken  
*T. Raaijmakers, projectleider, Centrum Werk en Gezondheid, Amersfoort*

12.10 Hoe komt werk aan bod in de spreekkamer van de verpleegkundig specialist?  
*B.L.M. Müskens, verpleegkundig specialist, Amsterdam UMC*

12.20 Ronde tafel met  
*N. Jannink, IBD Patiënt*  
*B.L.M. Müskens, verpleegkundig specialist, Amsterdam UMC*  
*T. Raaijmakers, projectleider, Centrum Werk en Gezondheid, Amersfoort*  
*M. Derikx, Bedrijfsarts, Amsterdam UMC, Nederlands Centrum voor Beroepsziekten*  
*M. Romberg-Camps, MDL-arts, Zuyderland Ziekenhuis, Sittard-Geleen*

12.45 Gemodereerde postersessies in de Meierij Foyer  
Lunch in de expositiehal

**Meet the expert Microscopische Colitis**

**Baroniezaal**

Voorzitter: *M. Scherpenzeel*

**Titel: Microscopische colitis vandaag de dag**

*Voor deze sessie moet van tevoren worden ingeschreven.*

13.45 Ervaringsverhaal patiënt  
*R. Nolden, Patiënt*

13.55 Stand van de wetenschap en nieuwe ontwikkelingen over microscopische colitis.  
*Dr. B.P.M. Verhaegh, MDL-arts, Laurentius Ziekenhuis, Roermond*

14.25 Resultaten peiling onder patiënten met microscopische colitis en zorgverleners.  
*M. Scherpenzeel, directeur, Crohn & Colitis NL, Woerden*

14.35 Discussie met de zaal: Waar liggen kansen en hiaten. Wat kan de patiëntenvereniging hierin betekenen?

14.45 Einde van deze sessie

15.15 Algemene ledenvergadering NVMDL

DONDERDAG 12 SEPTEMBER 2024

### Symposium Digitalisering I

Parkzaal

Voorzitter: *G. Veldhuijzen en A. Swager*

- 09.15      **Introductie Commissie Digitalisering**  
*Dr. G. Veldhuijzen, MDL-arts, Gelre Ziekenhuizen, Apeldoorn*
- 09.30      **Centralisering EPD's – big data voor dummies. Evidence behind the app**  
*Prof. dr. M.J. Pierik, MDL-arts, MUMC+, Maastricht*
- 09.45      **Ethische aspecten van de inzet van AI in de zorg**  
*Dr. L. Hartman, onderzoeker en docent AI in de zorg, ethicus, Erasmus MC*
- 10.05      **Paneldiscussie**
- 10.15      **Koffie-/theepauze in de expositiehal**

### Symposium Digitalisering II

Parkzaal

Voorzitter: *G. Veldhuijzen en A. Swager*

- 10.45      **Wat is AI en hoe kun je als MDL-arts hiermee je voordeel doen**  
*Dr. ir. F. van der Sommen, assistant professor, Eindhoven University of Technology*  
*Dr. J. de Groof, aios MDL, Amsterdam UMC*
- 10.57      **De endoscopie kamer van de toekomst**  
*Prof. dr. J.J.G.H.M. Bergman, MDL-arts, Amsterdam UMC*
- 11.09      **De CMIO spreekt: De poli van de toekomst**  
*J. Geesing, MDL-arts, Diaconessenhuis, Utrecht*
- 11.21      **Ludieke quiz: Digitaalvaardig / succesfactoren digitale transformatie zorgverleners en patiënten**  
*S. Verheijden, programmamanager, digivaardiginzorg.nl*
- 11.36      **Paneldiscussie**

DONDERDAG 12 SEPTEMBER 2024

**Symposium Sectie Gastrointestinale Oncologie**

**Parkzaal**

Voorzitters: *S.E.M. van de Ven en J. Westerhof*

**Titel: Oeps het was een NET**

11.45 Upper GI-NET: De nauwe samenwerking tussen de MDL-arts en oncoloog  
*Dr. M. Tesselaar, oncoloog, Antoni van Leeuwenhoek, Amsterdam*

12.15 NET wel, NET niet: De endoscopische herkenning en behandeling van upper-GI NET's  
*Dr. L.C. Duits, MDL-arts, Amsterdam UMC*

12.45 Lunch in de expositiehal en gemodereerde postersessies

**PhD Netwerk**

**Zaal 81**

Voorzitter: *A. Thijssen*

11.45 Door de ogen van de editor: hoe wordt jouw manuscript gereviewd?  
*Prof. dr. J.P.H. Drenth, MDL-arts, Amsterdam UMC*  
*Dr. Z.Z.R.M. Weerts, aios MDL, MUMC+*

12.45 Lunch in de expositiehal en gemodereerde postersessies

## Postersessie II

## Meierij Foyer

Moderator: A. Rezazadeh Ardabili

- 13.00 Octreotide does not prevent delayed bleeding after endoscopic papillectomy: a propensity score matching analysis  
C.M. van de Leur<sup>1</sup>, F.P. Vleggaar<sup>1</sup>, P. Didden<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, Nederland
- 13.05 Predictive value of the Mobile Health Index in inflammatory bowel diseases: six-month outcomes of a prospective cohort study  
L.J.M. Koppelman<sup>1</sup>, N.M. Althuis<sup>1</sup>, P.W.J. Maljaars<sup>1</sup>, P.W. Voorneveld<sup>1</sup>, R.J. Jacobs<sup>2</sup>, A.E. van der Meulen-de Jong<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Alrijne Ziekenhuis, Leiderdorp, Nederland
- 13.10 The predictive value of Intestinal ultrasound for treatment response in IBD: a systematic review  
J.M.B.W. Vos<sup>1</sup>, C. Teichert<sup>2</sup>, F.A.E. de Voogd<sup>2</sup>, B.G.P. Koot<sup>1</sup>, K.B. Gecse<sup>2</sup>, <sup>1</sup>Dept. of Pediatric Gastroenterology Hepatology and Nutrition, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, Nederland
- 13.15 Quantification of fluorescence angiography for visceral perfusion assessment: measuring agreement between two software algorithms  
D.J. Nijssen<sup>1, 2</sup>, J.J. Joosten<sup>1, 2</sup>, J. Osterkamp<sup>3</sup>, R.M. van den Elzen<sup>4, 5</sup>, D.M. de Bruin<sup>4, 5</sup>, M.B.S. Svendsen<sup>6</sup>, M.W. Dalsgaard<sup>6</sup>, S.S. Gisbertz<sup>1</sup>, R. Hompes<sup>1, 2</sup>, M.P. Achiam<sup>3</sup>, M.I. van Berge Henegouwen<sup>1, 2</sup>, <sup>1</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Surgery, Cancer Center, Amsterdam, <sup>3</sup>Dept. of Surgery, Rigshospitalet, Copenhagen, Denmark, <sup>4</sup>Dept. of Biomedical Data Sciences, Amsterdam UMC, Amsterdam, <sup>5</sup>Dept. of Biomedical Data Sciences, Cancer Center, Amsterdam, <sup>6</sup>Dept. of Biomedical Data Sciences, Rigshospitalet, Copenhagen, Denmark
- 13.20 The population with Primary Biliary Cholangitis is changing over time: milder disease and more metabolic comorbidities  
M.C. Van Hooff<sup>1</sup>, R.C. De Veer<sup>1</sup>, E. Werner<sup>1</sup>, U. Beuers<sup>2</sup>, J.P.H. Drenth<sup>2</sup>, F.J.C. Cuperus<sup>3</sup>, B. van Hoek<sup>4</sup>, B.J. Veldt<sup>5</sup>, M. Klemt-Kropp<sup>6</sup>, S. van Meer<sup>7</sup>, R.C. Verdonk<sup>8</sup>, H.J. Flink<sup>9</sup>, J.M. Vrolijk<sup>10</sup>, T.J.G. Gevers<sup>11</sup>, C.Y. Ponsioen<sup>2</sup>, R. Roomer<sup>12</sup>, P.C.J. Ter Borg<sup>13</sup>, L. Oterdoom<sup>14</sup>, M.A.M.C. Baven-Pronk<sup>15</sup>, A. Vrieze<sup>16</sup>, I.C.A.W. Konings<sup>17</sup>, J. Schmidt-Bohmer<sup>18</sup>, F.C. Bekkering<sup>19</sup>, S.H.C. van Stiphout<sup>20</sup>, N.F.M. van Gerven<sup>21</sup>, S.J. van den Hazel<sup>22</sup>, P.J. Bus<sup>23</sup>, A. Van der Beek<sup>24</sup>, S. Vandebosch<sup>25</sup>, M.J. Denters<sup>26</sup>, H.L.A. Janssen<sup>1, 27</sup>, N.S. Erler<sup>28</sup>, B.E. Hansen<sup>28</sup>, A.J. van der Meer<sup>1</sup> <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>3</sup>Dept. of Gastroenterology and Hepatology, UMC Groningen, Groningen, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Reinier de Graaf Gasthuis, Delft, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Noordwest Ziekenhuisgroep, Alkmaar, <sup>7</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>8</sup>Dept. of Gastroenterology and Hepatology, St. Antonius Ziekenhuis, Nieuwegein, <sup>9</sup>Dept. of Gastroenterology and Hepatology, Catharina Ziekenhuis, Eindhoven, <sup>10</sup>Dept. of Gastroenterology and Hepatology, Rijnstate Ziekenhuis, Arnhem, <sup>11</sup>Dept. of Gastroenterology and Hepatology, MUMC+, Maastricht, <sup>12</sup>Dept. of Gastroenterology and Hepatology, St. Franciscus Gasthuis & Vlietland, Rotterdam, <sup>13</sup>Dept. of Gastroenterology and Hepatology,

DONDERDAG 12 SEPTEMBER 2024

*Ikazia Ziekenhuis, Rotterdam, <sup>14</sup>Dept. of Gastroenterology and Hepatology, Hagaziekenhuis, Den Haag, <sup>15</sup>Dept. of Gastroenterology and Hepatology, Groene Hart Ziekenhuis, Gouda, <sup>16</sup>Dept. of Gastroenterology and Hepatology, Flevoziekenhuis, Almere, <sup>17</sup>Dept. of Gastroenterology and Hepatology, Admiraal de Ruyter Ziekenhuis, Goes, <sup>18</sup>Dept. of Gastroenterology and Hepatology, Dijklander Ziekenhuis, Hoorn, <sup>19</sup>Dept. of Gastroenterology and Hepatology, IJsselland Ziekenhuis, Capelle aan den IJssel, <sup>20</sup>Dept. of Gastroenterology and Hepatology, Elkerliek Ziekenhuis, Helmond, <sup>21</sup>Dept. of Gastroenterology and Hepatology, Rode Kruis Ziekenhuis, Beverwijk, <sup>22</sup>Dept. of Gastroenterology and Hepatology, Slingeland Ziekenhuis, Doetinchem, <sup>23</sup>Dept. of Gastroenterology and Hepatology, Laurentius Ziekenhuis, Roermond, <sup>24</sup>Dept. of Gastroenterology and Hepatology, Ziekenhuis Rivierenland, Tiel, <sup>25</sup>Dept. of Gastroenterology and Hepatology, ZorgSaam Ziekenhuis, Terneuzen, <sup>26</sup>Dept. of Gastroenterology and Hepatology, Zaan Medisch Centrum, Zaandam, <sup>27</sup>Dept. of Gastroenterology and Hepatology, Toronto Centre for Liver Disease, Toronto, Canada, <sup>28</sup>Dept. of Epidemiology and Biostatistics, Erasmus MC, Rotterdam, Nederland*

13.25

**Clinical course of acute kidney injury in cirrhotic patients: implications for prognosis and therapeutic approaches**

*S.E. Fischer<sup>1</sup>, M. Fiocco<sup>2, 3, 4</sup>, J.R.A. Balak<sup>5</sup>, J. Nieuwenhuizen<sup>6</sup>, M.J. Coenraad<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>2</sup>Dept. of Biomedical Data Sciences, Department of Biomedical Data Science, Leiden University, Leiden, <sup>3</sup>Dept. of Biomedical Data Sciences, Mathematical Institute Leiden, Leiden University, Leiden, <sup>4</sup>Dept. of Biomedical Data Sciences, Princess Maxima Center for Pediatric Oncology, Utrecht, <sup>5</sup>Dept. of Internal Medicine, Leids Universitair Medisch Centrum, Leiden, <sup>6</sup>Intensive Care, Leids Universitair Medisch Centrum, Leiden, Nederland*

DONDERDAG 12 SEPTEMBER 2024

**Ochtendprogramma V&VN MDL**

**Brabantzaal**

Voorzitter: *M.C.M. van der Ende - van Loon*

08.45 Welkomstwoord

09.00 Caring Doctors/Nurses  
*P. Deckers, directeur, Caring Doctors*

09.45 Kracht van Taal  
*L. van Espen, endoscopieverpleegkundige, Noordwest Ziekenhuisgroep, Alkmaar*

10.15 Koffie-/theepauze in de expositiehal

**Ochtendprogramma V&VN MDL**

**Brabantzaal**

Voorzitter: *M. van den Berg en N. Klooster*

10.45 Achalasie  
*N. Warringa, physician assistant, Amsterdam UMC*

11.15 Leefstijl coaching  
*J. Peters, leefstijlcoach en verpleegkundig specialist, Bravis Ziekenhuis, Bergen op Zoom*

11.45 FAP/Lynch  
*Dr. Y. van Herwaarden, MDL-arts, Radboudumc, Nijmegen*

12.15 Comfort programma  
*S. Louter, verpleegkundige, Spaarne Gasthuis, Haarlem*  
*Dr. A. Vehmeijer, MDL-arts, Spaarne Gasthuis, Haarlem*

12.45 Lunch in de expositiehal

**Programma V&VN MDL - Sectie Gastrointestinale Endoscopie**

**Parkzaal**

Voorzitter: *M.C.M. van der Ende - van Loon en M.C.A.M. Schilders*

13.45 Positieve gezondheid  
*M. Huber, arts en onderzoeker, Institute for Positive Health*

14.45 Antistolling beleid  
*S. Luijten, verpleegkundig specialist, Máxima Medisch Centrum, Eindhoven*

**Programma V&VN MDL - IBD**

**Zaal 81**

Voorzitter: *B.L.M. Müskens*

13.45 Meet the expert PSC en IBD  
*Prof. dr. C.Y. Ponsioen, MDL-arts, Amsterdam UMC*



## Long-term effectiveness and safety of ustekinumab in patients with ulcerative colitis: real-world data from the IBDREAM and Initiative on Crohn and Colitis registries

K.M. Totté<sup>1</sup>, L.M.M. Verleye<sup>1, 2, 3</sup>, R. West<sup>4</sup>, P.B. Mensink<sup>5</sup>, A.C. de Vries<sup>6</sup>, A.E. van der Meulen-de Jong<sup>7</sup>, M. Löwenberg<sup>8</sup>, F.D.M. van Schaik<sup>9</sup>, S. van der Mare<sup>10</sup>, M.J. Pierik<sup>2, 3</sup>, Z. Mujagic<sup>2, 3</sup>, T.E. Römkens<sup>11</sup>, M. Duijvestein<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, <sup>2</sup>Dept. of Gastroenterology and Hepatology, MUMC+, Maastricht, <sup>3</sup>Dept. of Gastroenterology and Hepatology, NUTRIM, Maastricht University, Maastricht, <sup>4</sup>Dept. of Gastroenterology, St. Franciscus Gasthuis & Vlietland, Rotterdam, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Medisch Spectrum Twente, Enschede, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>8</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>9</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>10</sup>Dept. of Gastroenterology and Hepatology, Haaglanden Medisch Centrum, Den Haag, <sup>11</sup>Dept. of Gastroenterology and Hepatology, Jeroen Bosch Ziekenhuis, Den Bosch, Nederland

**Background:** Although clinical effectiveness and safety of ustekinumab (UST) in ulcerative colitis (UC) have been shown in clinical trials, long-term real-world data are limited, especially beyond one year. **Methods:** We collected data from the IBDREAM and Initiative on Crohn and Colitis registries. Both Dutch multicentre registries collect prospective observational data from IBD patients. Adult patients with UC who received at least one intravenous and two subcutaneous doses of UST with no prior history of colectomy were included. The primary outcomes were corticosteroid-free clinical remission, defined as Simple Clinical Colitis Activity Index (SCCAI)  $\leq 2$ , and corticosteroid-free biochemical remission, defined as fecal calprotectin  $\leq 250\mu\text{g/g}$ , at week (W)52 and W104. Data on effectiveness up to W156, drug persistence rate, dose escalations, concomitant medication use and adverse events were also collected.

**Results:** A total of 127 patients were included, 41.7% of which were female. Median age at baseline was 49 (IQR: 26). Seven patients (5.5%) had not previously been treated with at least one biological and/or small molecule agent, while 30.7%, and 28.3% of patients had previously been treated with two or at least three different advanced therapies, respectively. At W52 and W104, 39.4% and 39.2% of patients were in corticosteroid-free clinical remission and 36.8% and 33.9% of patients were in corticosteroid-free biochemical remission, respectively. At W52 and W104, 39.2% and 37.1% of patients who had clinically active disease at baseline (n=75) achieved corticosteroid-free clinical remission. In patients with biochemically active disease at baseline (n=56), 47.2% and 40.6% achieved corticosteroid-free biochemical remission. Similar rates were observed at W156, although less patients reached this timepoint. Drug persistence rate was 77.2% after one year, and 65.6% after two years. A total of 39 patients discontinued UST before W104, 27 of which stopped before W52. Seventeen patients discontinued UST because of primary non-response, 16 due to secondary loss of response and nine because of other reasons (incl. colorectal carcinoma (n=1), sustained remission and side effects). Sixty-two adverse drug reactions were recorded in 36 patients; eight patients required hospitalisation.

**Conclusion:** In this real-world study, over one third of patients with UC were in corticosteroid-free clinical and/or biochemical remission two years after starting UST. The medication was relatively effective, despite the partly treatment-refractory study population. UST was well-tolerated and no new safety signals were identified. Our results indicate that UST is an effective and safe long-term therapy for patients with UC.

## Factors associated with need for second-line immunosuppressive treatment in patients with immune checkpoint inhibitor-induced colitis

M.R. Naber<sup>1</sup>, M. J. M. van Eijs<sup>2</sup>, M. Löwenberg<sup>3</sup>, B. Oldenburg<sup>4</sup>, K. P. M. Suijkerbuijk<sup>2</sup>, F.D.M. van Schaik<sup>4</sup>,  
<sup>1</sup>Dept. of Gastroenterology, UMC Utrecht, Utrecht, <sup>2</sup>Dept. of Medical Oncology, UMC Utrecht, Utrecht, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>4</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, Nederland

**Background:** Immune checkpoint inhibitors (ICI) are used in a variety of malignancies and they have revolutionized cancer treatment. ICI-induced colitis is one of the most common adverse effects associated with checkpoint inhibitors, which is usually treated with steroids as first-line therapy, based on the so-called CTCAE grade. In this study, we aimed to identify therapy response predictors in ICI colitis.

**Methods:** Patients diagnosed with histologically confirmed ICI colitis between 2013 and 2022 in a single center were retrospectively identified. Clinical, endoscopic and histological data were collected. For analysis of endoscopic and histological data, only patients with an endoscopy within four days after starting prednisone were included. Univariate analysis was performed to identify possible predictors for initiation of second-line therapy. Predictors with univariate  $p < 0.1$  were combined in a multivariate model.

**Results:** Out of 1,079 ICI-treated patients, 94 patients were identified with ICI colitis, of whom 78 (83%) received systemic corticosteroids. All patients not receiving immunosuppressive therapy were diagnosed with CTCAE grade I colitis. Second-line therapy was initiated in 44 (47%) patients (infliximab  $n=28$ , 30%; vedolizumab  $n=15$ , 16%; mycophenolate mofetil  $n=1$ , 1%). Immunotherapy type (reference no aCTLA4 therapy, aCTLA4-based OR 6.8,  $p=0.0001$ ), endoscopic Mayo score (reference Mayo 0; Mayo I OR 5.8,  $p=0.01$ ; Mayo  $\geq 2$  OR 24,  $p=0.0004$ ), CRP (OR 1.0,  $p=0.04$ ), a histological acute inflammatory pattern (OR 2.9,  $p=0.02$ ) and presence of basal plasmacytosis (OR 0.1,  $p=0.05$ ) were associated with initiation of second-line therapy. CTCAE-grade at onset, fecal calprotectin and other histological parameters showed no correlation with need for second-line therapy. In multivariate analysis, only Mayo score (i.e. Mayo  $\geq 2$  OR 51.9,  $p=0.01$ ) and aCTLA4-based immunotherapy (OR 6.4,  $p=0.02$ ) remained as significant predictors of need for second-line immunosuppressive therapy.

**Conclusion:** Endoscopic disease characteristics and ICI type, but not CTCAE grade, are associated with the need for second-line therapy in patients with ICI colitis. No biochemical and histological predictors for treatment response could be identified. Prediction of treatment response in ICI colitis might benefit from structured data collection and standardized histological and endoscopic reporting.

## **The efficacy of comprehensive multivitamin and mineral supplement to treat symptoms of fatigue in patients with Inflammatory Bowel Disease**

*R.L.H. Laheij<sup>1</sup>, A.D. Bierens-Peters<sup>1</sup>, K.F. Bruin<sup>1</sup>, M.W.M.D Lutgens<sup>1</sup>, M. Sikkema<sup>1</sup>, U. De Wit<sup>1</sup>, R.J.F. Laheij<sup>1</sup>*  
*<sup>1</sup>Dept. of Gastroenterology and Hepatology, Elisabeth-TweeSteden Ziekenhuis, Tilburg, Nederland*

**Background:** Patients with inflammatory bowel disease (IBD) very often report feeling tired for no reason. Malnutrition and vitamin or mineral deficiencies are also very common among patients with IBD. The aim of this study was to evaluate the efficacy of a multivitamin and mineral supplement for the treatment of fatigue in patients with IBD.

Patients with inflammatory bowel disease (IBD) very often report feeling tired for no reason. Malnutrition and vitamin or mineral deficiencies are also very common among patients with IBD. The aim of this study was to evaluate the efficacy of a multivitamin and mineral supplement for the treatment of fatigue in patients with IBD.

**Methods:** Single-centre, randomized placebo-controlled clinical trial to compare a comprehensive over-the-counter multivitamin and mineral supplement (supplemented group) with an identical presented placebo (placebo group) for the treatment of fatigue. Non-vitamin deficient patients with IBD in remission with immunomodulators and/or biological therapy were asked to report symptoms of fatigue on a Visual Analog Scale (0-10) and the validated Chalder fatigue questionnaire (CFQ) at week 12 and 24. The validated CFQ has a scoring range from 0-33 and 2 subscales physical and psychological fatigue. Patients were considered to be fatigued by the CFQ with a score of 12 or above.

**Results:** A total of 214 patients reported fatigue at the start of the study. Of these patients 115 and 99 were assigned to the supplement and placebo groups, respectively. In the supplemented and placebo group, 32 (34%) and 18 (21%) patients, respectively, were not fatigued according to the CFQ definition at 24 weeks (Unadjusted Odds Ratio (OR): 2.0 (95% Confidence Interval (CI): 1 -3.8). In particular patients with Ulcerative Colitis (UC) and supplement use were less fatigued at 24 weeks (OR 5.7 (95%CI:1.3-24.1). Improvement of fatigue between baseline and 24 weeks was not statistically different for either the supplemented and placebo group.

**Conclusion:** Although improvement in fatigue symptoms was limited, a significant number of patients with IBD in remission with immunomodulators, and/or biological therapy using a very comprehensive vitamin and mineral supplement reported improvement of fatigue after 24 weeks of use.

## **Pregnancy outcomes in patients with inflammatory bowel disease in three university medical centers in the Netherlands**

*D.G. Bouwknecht<sup>1</sup>, G. Dijkstra<sup>1</sup>, W.A. van Dop<sup>2</sup>, C.J. van der Woude<sup>3</sup>, M.C. Visschedijk<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, UMC Groningen, Groningen, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, Nederland*

**Background:** As inflammatory bowel disease (IBD) is frequently diagnosed in young adults, disease often coincides with pregnancy. 25% of females has their first pregnancy after diagnosis. Current guidelines advise treatment through specialized IBD clinics for patients wishing to conceive, which are increasingly implemented, but outcome data from these centers is scarce. We therefore describe the pregnancy-course in 3 IBD university clinics.

**Methods:** In this multicenter, retrospective cohort study, female IBD-patients previously pregnant during treatment in either three participating Dutch university hospitals between the inception of the respective EPD and 2022 were included. Data on patient- and disease characteristics, labvalues, medications and pregnancy outcomes were extracted. Topics relevant to pregnancy were logged, including intoxications, the use of folic acid and vitamin D and gestational weight gain.

**Results:** Data was collected on 620 women, incl. 376 (60.6%) with Crohn's disease (CD), 230 (37.1%) with ulcerative colitis (UC), and 13 (2.1%) with IBD-unclassified (IBDU). 68 (18.1%) CD-patients had a history of perianal disease. Mean age at conception of the first pregnancy was 30yrs. 983 pregnancies were included, of which 10.3% was conceived using assisted reproductive technologies, incl. in vitro fertilization (IVF) in 3.6%. During 9.8% of pregnancies, the mother smoked at conception. Medication was used during 71.0% of pregnancies, most often consisting of thiopurines (27.1%) and amino salicylates (24.4%). Appropriate gestational weight gain was achieved in 31.1%. 152 (15.5%) pregnancies resulted in miscarriage, 12 (1.2%) pregnancies were ectopic. In the remaining pregnancies, 511 (62.4%) newborns were delivered vaginally. A caesarean section (CS) was performed in 234 cases (23.8%), of whom 54 mothers (23.1%) had perianal disease. An adverse pregnancy outcome was noted in 159 (21.3%), incl. low birthweight in 78 (10.5%), prematurity in 85 (11.4%) and dysmaturity in 89 (11.9%). Adverse outcomes occurred more often in women experiencing disease activity during pregnancy, though not statistically significant (30.8% vs 21.7%,  $p=0.1$ ). 2 patients developed deep venous thromboembolism during or within 6 weeks after pregnancy.

**Conclusion:** In IBD the mean age at conception and need for IVF were comparable to the general Dutch population. A CS was performed more often when compared to healthy pregnancies in the Netherlands (23.8% vs 17.6%). Low birth weight (10.5% vs 5.7%), prematurity (11.4% vs 6.6%) and dysmaturity (11.9% vs 9.7%) occurred more often in comparison to the known rates in Dutch pregnancies, emphasizing that adequate counseling before and during pregnancy in IBD is essential.

## Can dietary patterns and diet quality be associated with disease activity?

L.J.M. Koppelman<sup>1</sup>, C.L. Stevens<sup>2</sup>, I. Barth<sup>2</sup>, A.E. van der Meulen-de Jong<sup>1</sup>, M.J.E. Campmans-Kuijpers<sup>2</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>2</sup>Dept. of Gastroenterology and Hepatology, UMC Groningen, Groningen, Nederland

**Background:** Dietary factors can influence the disease course in Inflammatory bowel disease (IBD). This study aims to examine the relation between dietary patterns and the dietary Inflammatory Index (DII), and disease activity in IBD patients.

**Methods:** Baseline data from a one-year prospective cohort study in consecutive IBD patients at the outpatient clinic in two Dutch hospitals was analysed. The GINQ-FFQ, an IBD specific food frequency questionnaire was used to assess dietary intake in IBD patients at baseline of this cohort. Consumed foods were categorised into 26 food groups and analysed for dietary patterns using principal component analysis (PCA). The DII, a dietary quality score reflecting inflammatory potential, was calculated by comparing individual food intake of 28 components to a global average and multiplying this by inflammatory potential. Patients were categorized by disease type (Crohn's Disease (CD) or ulcerative colitis (UC)), and biochemical disease activity (remission; CRP  $\leq$  5 mg/L and/or FCP  $\leq$  150  $\mu$ g/g). Mann-Withey U and T-tests were performed to assess differences in dietary patterns and DII.

**Results:** 177 patients (52% female, 55.4% CD, median age 50 years) correctly filled out the GINQ-FFQ. Three dietary patterns were identified: western diet, flexitarian diet, and convenience diet. The western diet was high in bread, meat and poultry, pastries and biscuits, cold meats, potatoes and root vegetables, sugar and sweets, sweet sauces, and cheese and low in nuts and seeds, vegetables, soups, and fruit. The flexitarian diet consisted of many savoury sauces, eggs, vegetables, potatoes and root vegetables, fats and oils, soups, herbs and spices, savoury snacks and crisps, fish, legumes, and grain products and thickeners. The convenience diet was high in grain products and thickeners, composite dishes, non-alcoholic drinks, and meat and poultry, but low in fats and oils, cold meats, alcoholic drinks, and cheese. No differences in consumption of these dietary patterns were observed between patients with active (n=40) and remitted disease (n=137) (p=0.779, p=0.087, p=0.212, respectively). UC patients favoured a flexitarian diet more than CD patients (p=0.030). No differences in DII scores were found (p=0.802). Patients in biochemical remission consumed more alcohol (p=0.04) compared to those with active disease.

**Conclusion:** This analysis found no direct association between dietary patterns or dietary inflammatory potential and disease activity. However, patients in remission consumed more alcohol, and a trend towards a flexitarian diet was observed in those with active disease. The full study will follow these patients for a year to assess potential changes in diet.

## Cholangioscopy-guided Single vs Bite-on-Bite biopsies in Indeterminate Biliary Duct Strictures

D.M. de Jong<sup>1</sup>, P.J.F. de Jonge<sup>1</sup>, P.M.C. Stassen<sup>1</sup>, P. Karagyozov<sup>2</sup>, J.J. Vila<sup>3</sup>, I. Fernandez-Urien<sup>3</sup>, M. James<sup>4</sup>, S.V. Venkatachalapathy<sup>4</sup>, K.W. Oppong<sup>5</sup>, A. Anderloni<sup>6</sup>, A. Repici<sup>7</sup>, R. Gabbiadini<sup>7</sup>, D. Joshi<sup>8</sup>, M. Ellrichmann<sup>9</sup>, L. Kylänpää<sup>10</sup>, M. Udd<sup>10</sup>, F. van der Heide<sup>11</sup>, P. Hindryckx<sup>12</sup>, G. Corbett<sup>13</sup>, K. Basilya<sup>14</sup>, V. Cennamo<sup>15</sup>, S. Landi<sup>15</sup>, S. Phillpotts<sup>16</sup>, G.J.M. Webster<sup>16</sup>, M.J. Bruno<sup>17</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC University Medical Center, Rotterdam, <sup>2</sup>Dept. of Gastroenterology, Acibadem City Clinic University Hospital Tokuda, Sofia, Bulgarije, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Hospital Universitario de Navarra, Pamplona, Spanje, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Nottingham University Hospitals NHS Trust, and School of Medicine, University of Nottingham, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Newcastle Upon Tyne NHS Foundation Trust, Newcastle, Verenigd Koninkrijk, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Fondazione I.R.C.C.S. Policlinico San Matteo, Pavia, Italië, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Humanitas Research Hospital, Milano, Italië, <sup>8</sup>Institute of Liver Studies, King's College Hospital NHS Foundation Trust, London, Verenigd Koninkrijk, <sup>9</sup>Dept. of Gastroenterology and Hepatology, University Hospital Schleswig-Holstein, Campus Kiel, Kiel, Duitsland, <sup>10</sup>Dept. of Gastrointestinal Surgery, Helsinki University Central Hospital, Helsinki, Finland, <sup>11</sup>Dept. of Gastroenterology and Hepatology, Universitair Medisch Centrum Groningen, Groningen, <sup>12</sup>Dept. of Gastroenterology and Hepatology, Universitair Ziekenhuis Gent, Gent, België, <sup>13</sup>Dept. of Gastroenterology and Hepatology, Cambridge University Hospitals NHS Foundation Trust, Cambridge, Verenigd Koninkrijk, <sup>14</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>15</sup>Dept. of Gastroenterology and Interventional Endoscopy, Local Health Authority of Bologna, Bologna, Italië, <sup>16</sup>Dept. of Gastroenterology, University College London Hospitals, London, Verenigd Koninkrijk, <sup>17</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, Nederland

**Background:** Indeterminate biliary duct strictures (IBDS) present diagnostic challenges. Digital single-operator cholangioscopy (d-SOC) has enhanced diagnostic accuracy by enabling targeted intra-ductal biopsies (1-3). While there is no consensus on the optimal biopsy strategy, evidence suggests that at least four biopsies yield adequate samples for pathological examination (4). Due to the desmoplastic character of cholangiocarcinoma, larger and deeper samples might improve the diagnostic yield. The study aimed to compare the diagnostic yield of d-SOC guided single standard biopsies (SB) with those obtained via the bite-on-bite-biopsy (BBB) technique in patients with IBDS.

**Methods:** This international, multi-center, prospective cohort study included IBDS patients who underwent d-SOC from November 2020 to August 2022 at 14 European tertiary referral centers (Dutch Trial Register: NL9649). IBDS was defined as a bile duct stricture of indeterminate nature after previous laboratory work-up, imaging or endoscopic retrograde cholangiography, with or without brush-cytology of fluoroscopy guided intra-ductal biopsies. During d-SOC, each patient's IBDS was sampled by obtaining at least four SB and at least one BBB. Definitive diagnosis was established on pathology outcomes (biopsies or surgical resection specimens) or clinical follow-up of  $\geq 1$  year. Primary outcome was the accuracy of both biopsy techniques.

**Results:** Eighty-nine patients were included (62% male, median age: 66 years), with 52 having a hilar and 37 a distal stricture. SB and BBB biopsies were technically successful and with sufficient tissue for diagnosis in 82 (92.1%, median number of SB = 4) and 78 (87.6%, median number of BBB biopsies = 2), respectively. These biopsies confirmed malignancy in 31/82 and 29/78 of cases, respectively. A comparison revealed discordant results in 3/76 (3.9%) of cases in which both techniques were successful. Only in 3/89 patients (3.4%) did BBB provide an additional yield compared to SB.

In 82 (92.1%) patients follow-up was complete and malignancy was confirmed in 51 (62.2%) patients. Sensitivity, specificity and accuracy for malignancy or high-grade dysplasia were 66.0%, 100%, and 78.8% for SB, and 63.8%, 100%, and 77.6% for BBB, respectively. For both sampling techniques, sensitivity and accuracy decreased significantly if a stent was placed at a prior ERC or whenever prior intra-ductal tissue acquisition had been performed. No adverse events related to d-SOC guided biopsies were noted.

**Conclusion:** In this prospective study, BBB did not outperform at least four random SB of IBDS. Prior manipulation of the IBDS, by stent placement or prior tissue acquisition, is associated with a decreased yield.

## Hyperbaric oxygen therapy for surgical fistula closure is feasible in perianal fistulizing Crohn's disease

L.G.M. Mulders<sup>1</sup>, K.J. Beek<sup>2</sup>, J.A.W. Tielbeek<sup>3</sup>, J. Stoker<sup>2</sup>, G.R.A.M. D'Haens<sup>1</sup>, C.J. Buskens<sup>4</sup>, R.A. van Hulst<sup>5</sup>, K.B. Geerse<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Radiology and Nuclear Medicine, Amsterdam UMC, Amsterdam, <sup>3</sup>Dept. of Radiology and Nuclear Medicine, Spaarne Gasthuis, Haarlem, <sup>4</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, <sup>5</sup>Dept. of Anesthesiology, Amsterdam UMC, Amsterdam, Nederland

**Background:** Perianal fistulas occur in up to 30% of patients with Crohn's disease (pfCD) and frequently require a combined medical and surgical treatment approach. Hyperbaric Oxygen Therapy (HBOT; breathing pressurized 100% oxygen) has previously shown benefit in treatment-refractory pfCD. In this pilot study, we aim to assess the feasibility of surgical fistula closure after 4 weeks HBOT, and efficacy of combining surgical closure and 8 weeks HBOT.

**Methods:** Patients with complex pfCD refractory to at least 6 months of anti-TNF were included in this study. All patients received a seton prior to starting treatment with 40 sessions (8 weeks) of HBOT (each lasting 110 minutes, with 5-minute air breaks) with 100% oxygen at 2.4 atmosphere. At week 4 the seton was removed, and surgical closure of the internal fistula opening was attempted. All patients continued stable dose of medical treatment during the study. Response was assessed by the fistula drainage assessment (FDA) and the perianal disease activity index (PDAI) at week 9, 26 and 52, and by pelvic MRI at week 9 and 26. MRI response was defined as a decrease of 2 points in MAGNIFI-CD, MRI remission as a MAGNIFI-CD  $\leq 6$ . (Serious) Adverse Events (AE) were reported for 52 weeks. Univariate logistical regression was used to explore potential variates associated with PDAI response ( $\leq 4$ ) at week 26.

**Results:** Ten patients completed treatment and were analyzed. Median Crohn's and perianal disease duration were 9.0 [IQR 1.8-14.5] and 3.5 [IQR 1.8-7.3] years respectively, 20% had a proctitis, 30% had >1 internal fistula opening, and mean number of fistula tracts was 3.5 (95%CI 2.8-6.3). All patients completed HBOT and underwent a technically successful surgical procedure at week 4. No proctitis was encountered at week 4 during examination under anesthesia. PDAI response was achieved by 30%, 60%, 58% at week 9, 26 and 52, respectively. FDA response/remission was achieved in 50/20%, 80/40% and 80/50% of patients at week 9, 26 and 52, respectively. MRI response/remission was achieved in 60/10% and 60/20% at week 9 and 26, respectively. No significant parameters were associated with PDAI response at week 26 in univariate logistical regression. (S)AEs included one patient with a potential oxygen toxicity seizure without long term effects, and one patient reported claustrophobia, no new AEs were reported.

**Conclusion:** HBOT is feasible in combination with surgical therapy in patients with complex pfCD refractory to anti-TNF therapy. Patients had long-lasting benefit of the combined treatment approach. Further translational data are currently analyzed to clarify mechanisms of action and to explore potential biomarkers for therapy response.

## **MRI-based score accurately identifies liver transplant patients without rejection avoiding need for liver biopsy: a multisite European study**

J.J. Schaapman<sup>1</sup>, E.S. Shumbayawonda<sup>2</sup>, M. Castelo-Branc<sup>3</sup>, F. Caseiro Alves<sup>3</sup>, T. Costa<sup>3</sup>, E. Fitzpatrick<sup>4</sup>, K. Tupper<sup>5</sup>, A. Dhawan<sup>5</sup>, M. Deheragoda<sup>6</sup>, E. Sticova<sup>6</sup>, M. French<sup>2</sup>, C. Beyer<sup>7</sup>, S. Rymell<sup>7</sup>, D. Tonev<sup>7</sup>, H. Verspaget<sup>1</sup>, S. Neubauer<sup>8</sup>, R. Banerjee<sup>7</sup>, H.J. Lamb<sup>9</sup>, M.J. Coenraad<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>2</sup>Dept. of Radiology, Perspectum Diagnostics Ltd, Oxford, <sup>3</sup>Dept. of Radiology, Coimbra Institute for Biomedical Imaging and Translational Research, Coimbra, Portugal, <sup>4</sup>Dept. of Gastroenterology and Hepatology, King's college Hospital, Londen, <sup>5</sup>Dept. of Pediatrics, King's college Hospital, Londen, <sup>6</sup>Dept. of Pathology, King's college Hospital, Londen, <sup>7</sup>Dept. of Research & Development, Perspectum Diagnostics Ltd, Oxford, <sup>8</sup>Dept. of Radiology, Radcliffe Department of Medicine, Oxford, Verenigd Koninkrijk, <sup>9</sup>Dept. of Radiology, Leids Universitair Medisch Centrum, Leiden, Nederland

**Background:** Serum liver tests (serum tests) and histological assessment for T-cell mediated (TcM) rejection are essential for post-liver transplant monitoring. Liver biopsy carries risk of complications which are preferably avoided in low-risk patients. Multiparametric MRI (mpMRI) is a reliable non-invasive diagnostic method which quantifies liver disease activity and has prognostic utility. Our aim was to determine whether using mpMRI in combination with serum tests could noninvasively identify low-risk post-liver transplant patients who are eligible to avoid invasive liver biopsies.

**Methods:** In a multicentre prospective study (RADICAL2), including 131 adult and paediatric (children and adolescent) patients with previous liver transplant from the Netherlands, Portugal, and UK, concomitant mpMRI and liver biopsies were performed. Biopsies were centrally read by two expert pathologists. TcM rejection was assessed using BANFF global assessment (BANFF-GA). Diagnostic accuracy to discriminate no rejection vs. indeterminate or TcM liver transplant rejection was performed using area under the receiver operating characteristic curve (AUC).

**Results:** There was a high inter-observer variability ( $0 < 0.85$ ) across all histology scores. 38% of patients had no rejection, while 62% had either indeterminate (21%) or TcM rejection (41%). The combined score of mpMRI and serum tests had AUC 0.7 (NPV: 0.8) to identify those without either indeterminate or TcM rejection. In the 18% of patients where therapy changed (according to clinical discretion), cTl (841ms vs. 789ms;  $p=0.006$ ), and GGT (284 vs. 125;  $p=0.013$ ) were significantly higher compared to those without a change in therapy.

**Conclusion:** Combining mpMRI and serum tests accurately identified patients without indeterminate or T-cell mediated rejection. mpMRI used alongside serum tests has utility to identify patients who could safely avoid liver biopsy for suspected acute cellular rejection, in both adult and paediatric post-transplant populations.



## **Patient's per-procedural colonoscopy experience: how accurate is the clinician's assessment?**

*Q.N.E. van Bokhorst<sup>1</sup>, C.V. Geerlings<sup>1</sup>, M. van der Vlugt<sup>1</sup>, K.J. Nass<sup>2</sup>, L.J. Neilson<sup>3, 4</sup>, P. Fockens<sup>1</sup>, C.J. Rees<sup>3, 4</sup>, E. Dekker<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Internal Medicine, Rijnstate Ziekenhuis, Arnhem, <sup>3</sup>Dept. of Gastroenterology, South Tyneside and Sunderland NHS Foundation Trust, South Shields, Verenigd Koninkrijk, <sup>4</sup>Dept. of Gastroenterology, Population Health Sciences Institute Newcastle University, Newcastle Upon Tyne, Verenigd Koninkrijk*

**Background:** The Gloucester Comfort Scale (GCS) is frequently used by clinicians to report patient comfort during colonoscopy. However, insights regarding the extent to which clinician-reported GCS scores really represent the patient's experience are lacking. Therefore, we aimed to assess the level of agreement between clinician-reported GCS scores and the level of patient-reported discomfort and pain.

**Methods:** Consecutive patients undergoing colonoscopy at two Dutch endoscopy clinics were invited to complete the Newcastle ENDOPREM™ (Neilson et al., *BMJ Open Gastroenterol*, 2021), a validated measure of patient experience of gastrointestinal endoscopy, within 48 hours after colonoscopy. Per-procedural comfort from the clinician's perspective is routinely reported by either the endoscopy nurse or endoscopist using the GCS (1 to 5 scale). Per-procedural experience from the patient's perspective was reported in terms of both the level of discomfort and pain on a 1 (no discomfort/pain) to 5 (worst discomfort/pain imaginable) scale. Moderate to severe discomfort and pain were defined as scores >3. Levels of agreement between clinician- and patient-reported scores were assessed using the Cohen's kappa statistic. Regression analyses were used to identify factors associated with moderate to severe levels of discomfort and pain.

**Results:** A total of 243 patients were included. Among included patients, 53 (22%) reported a discomfort score >3 and 60 (25%) reported a pain score >3. A GCS score >3 was reported for 18 (7.4%) patients. Compared to the discomfort score, GCS score was higher for 52 (21%) and lower for 72 (30%) patients, while compared to the pain score the GCS score was higher for 39 (16%) and lower for 71 (29%). For patients that reported moderate to severe discomfort or pain, GCS underreported the level of discomfort and pain in almost all cases (discomfort: 49/53 [92%], pain: 54/60 [90%]). The level of agreement between GCS and discomfort scores was minimal (Cohen's  $\kappa$ : 0.34), agreement between GCS and pain scores was weak (Cohen's  $\kappa$ : 0.47). Multivariable regression indicated that female gender and age <55 years were associated with both moderate to severe discomfort and pain. Moreover, colonoscopy indications other than colonoscopy in the context of the colorectal cancer screening program were associated with moderate to severe discomfort, while sigmoid diverticulosis was associated with moderate to severe pain (all  $p < 0.05$ ).

**Conclusion:** Clinician-reported GCS scores, used to indicate per-procedural patient comfort, underreport discomfort and pain as reported by patients. Therefore, we support the use of patient-reported comfort scores for accurate monitoring of patient's per-procedural comfort.

## **Gastrointestinal angiodysplasia resolution following transcatheter aortic valve implantation: a prospective cohort study**

L.C.M.J. Goltstein<sup>1</sup>, M.J.P. Rooijackers<sup>2</sup>, N.D.E. Thierens<sup>1</sup>, S.C.M. Schoormans<sup>3</sup>, H. Beaumont<sup>4</sup>, C. Houdeville<sup>5</sup>, M.P.A. Hoeks<sup>3</sup>, E.J.M. van Geenen<sup>1</sup>, S.R. Rijpma<sup>3</sup>, X. Dray<sup>5</sup>, N. van Royen<sup>2</sup>, J.P.H. Drenth<sup>4</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, <sup>2</sup>Dept. of Cardiology, Radboudumc, Nijmegen, <sup>3</sup>Dept. of Hematology, Radboudumc, Nijmegen, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>5</sup>Dept. of Gastroenterology and Interventional Endoscopy, Sorbonne University, Parijs, Frankrijk

**Background:** Heyde syndrome is the co-occurrence of aortic stenosis and gastrointestinal bleeding secondary to vascular lesions, including angiodysplasias. Several studies have demonstrated cessation of gastrointestinal bleeding after transcatheter aortic valve implantation (TAVI), but the etiology and effects on vascular lesions are largely unknown. We aimed to establish the effects of TAVI on gastrointestinal vascular lesions and identify the factors associated with recovery.

**Methods:** In this prospective, single-center cohort study, patients with iron-deficiency anemia on the TAVI waitlist from September 2020 to February 2022 were assessed by capsule endoscopy. Those with vascular lesions were reassessed six months after TAVI. Endoscopic images were anonymized and evaluated by two independent researchers. The primary outcome was the mean difference in the number of vascular lesions.

**Results:** Twenty-four patients underwent capsule endoscopy, and vascular lesions were present in 18 (prevalence 75%). TAVI was performed in 15/18 patients with vascular lesions, of which 11 agreed to a second capsule endoscopy. The mean number of vascular lesions across the gastrointestinal tract decreased from 6.4 (SD 5.6) to 2.0 (SD 2.1) ( $P = .036$ ). The number of vascular lesions decreased in 9/11 (82%) patients, including 6/11 (55%) who no longer had typical angiodysplasias. Cessation of angiodysplasias was less frequent in patients who had multiple valvular heart disease before TAVI (0/3 [0%] vs 6/8 [75%]) and patients with significant paravalvular leakage after TAVI (2/5 [40%] vs 4/6 [67%]).

**Conclusion:** Angiodysplasias are present in 75% of anemic patients with severe aortic stenosis. TAVI effectively reduces the size and number of angiodysplasias in these patients.

## **EUS-CDS is associated with less complications compared to PTBD after a failed ERCP in patients with a distal malignant common bile duct obstruction: Prospective outcomes of a Dutch registry**

M.J.P. de Jong<sup>1</sup>, F. van Delft<sup>1</sup>, E.J.M. van Geenen<sup>1</sup>, A. Bogte<sup>2</sup>, R.C. Verdonk<sup>3</sup>, N.G. Venneman<sup>4</sup>, J.M. Vrolijk<sup>5</sup>, J.W.A. Straathof<sup>6</sup>, R.A. Bijlsma<sup>7</sup>, S.D. Kuiken<sup>8</sup>, R. Quispel<sup>9</sup>, M. Hadithi<sup>10</sup>, K. Basiliya<sup>11</sup>, F.P. Vleggaar<sup>2</sup>, T.M. Bisseling<sup>1</sup>, T.R. de Wijkerslooth<sup>12</sup>, M.J. Bruno<sup>13</sup>, R.L.J. van Wanrooij<sup>14</sup>, P.D. Siersema<sup>15, 16</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, <sup>2</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>3</sup>Dept. of Gastroenterology and Hepatology, St. Antonius Ziekenhuis, Nieuwegein, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Medisch Spectrum Twente, Enschede, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Rijnstate Ziekenhuis, Arnhem, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Maxima Medisch Centrum, Veldhoven, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Martini Ziekenhuis, Groningen, <sup>8</sup>Dept. of Gastroenterology and Hepatology, OLVG, Amsterdam, <sup>9</sup>Dept. of Gastroenterology and Hepatology, Reinier de Graaf Gasthuis, Delft, <sup>10</sup>Dept. of Gastroenterology and Hepatology, Maasstad Ziekenhuis, Rotterdam, <sup>11</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>12</sup>Dept. of Gastroenterology and Hepatology, Antoni van Leeuwenhoek Ziekenhuis, Amsterdam, <sup>13</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>14</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>15</sup>Dept. of Gastroenterology, Erasmus MC, Rotterdam, <sup>16</sup>Dept. of Gastroenterology, Radboudumc, Nijmegen, Nederland

**Background:** Endoscopic retrograde cholangiopancreatography (ERCP) with placement of a self expanding metal stent (SEMS) is the gold standard for drainage in case of malignant obstruction of the distal common bile duct (CBD). Nevertheless, 12.5% of these procedures fail. Percutaneous transhepatic biliary drainage (PTBD) is the most frequently used alternative, despite its high 30-day mortality (15-20%) and morbidity (up to 60%). EUS-guided biliary drainage (EUS-CDS) with a lumen apposing metal stent (LAMS) between duodenum and CBD is emerging as alternative drainage modality. Data on the long-term outcomes of alternative biliary drainage techniques is limited. Therefore, this Dutch registry aimed to provide insight in the chosen drainage modality after a failed ERCP-procedure and evaluated the outcomes prospectively.

**Methods:** This multicenter investigator-initiated registry included consecutive patients with malignant obstruction of the distal CBD after an unsuccessful ERCP over an inclusion period of 18 months. Patients were treated by either EUS-CDS or PTBD based by discretion of the endoscopist. Follow-up duration was 180 days. Primary endpoints were procedure-related morbidity and mortality within 90 days post-procedure.

**Results:** In total, 55 patients were included in the registry. PTBD was performed in 12 patients (technical success 100%) and EUS-CDS in 43 patients (technical success 97.7%). Median post-procedural hospital stay was three days longer in the PTBD group compared to the EUS-CDS group (4 days (IQR 2-6 days) vs. 1 day (IQR 1-2 days), respectively). After 30 days, >50% bilirubin reduction was achieved in 83.3% in the PTBD group vs 74.2% in the EUS-CDS group (p=0.525). Mortality rate after 90 days was 66.7% in the PTBD group and 20.9% in the EUS-CDS group (p=0.001). In the 90 days after the procedures, 11/12 (91.7%) patients in the PTBD group developed one or more complications compared to 19/43 (44.2%) patients in the EUS-CDS group (p=0.003).

**Conclusion:** EUS-CDS is associated with less complications compared to PTBD after a failed ERCP in patients with malignant distal CBD obstruction, as it results in a shorter post-procedural hospital admission and lower morbidity and mortality rates. Although, a randomized controlled trial is needed to confirm this superiority.

## **Heterozygous variant of CYP2C8\*3 as protective factor for developing post-ERCP pancreatitis.**

M.J.P. de Jong<sup>1</sup>, R.N. Kuipers<sup>1</sup>, C.J. Sperna Weiland<sup>2</sup>, R.C. Verdonk<sup>3</sup>, T.M. Bisseling<sup>1</sup>, D. Dalloyaux<sup>1</sup>, N.G. Venneman<sup>4</sup>, M. Hadithi<sup>5</sup>, E.J.M. van Geenen<sup>1</sup>, J.P.H. Drenth<sup>6</sup>, R. te Morsche<sup>1</sup>, M.J. Bruno<sup>7</sup>, F. van Delft<sup>1</sup>, P.D. Siersema<sup>8, 9</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Jeroen Bosch Ziekenhuis, Den Bosch, <sup>3</sup>Dept. of Gastroenterology and Hepatology, St. Antonius Ziekenhuis, Nieuwegein, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Medisch Spectrum Twente, Enschede, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Maasstad Ziekenhuis, Rotterdam, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>8</sup>Dept. of Gastroenterology, Erasmus MC, Rotterdam, <sup>9</sup>Dept. of Gastroenterology, Radboudumc, Nijmegen, Nederland

**Background:** Even though numerous risk factors and methods for prevention of post-endoscopic retrograde cholangiopancreatography (ERCP) pancreatitis (PEP) have been identified, it persists as the most prevalent complication. Administration of 100mg diclofenac prior to ERCP represents the most frequently used prophylaxis. Diclofenac is predominantly metabolized by various cytochrome P450 enzymes. The potential presence of single nucleotide polymorphisms (SNP) in these enzymes could cause interindividual variability in metabolization rates, which could affect serum plasma levels of diclofenac. Given the limited available research on this subject, the aim of this study was to investigate whether differences in presence of SNPs in the CYP-enzymes involved in diclofenac metabolism were associated with PEP.

**Methods:** This multicentre cohort study included patients above 18 years who underwent ERCP between 2012 and 2022. Upon inclusion, patients were divided into the PEP or control group. Real-time polymerase chain reactions were performed on buccal smear samples to identify gene variants involved in the diclofenac metabolism (e.g. CYP2C8\*3). Secondary endpoints were validation of known and possibly yet unknown risk factors for PEP.

**Results:** In total, 103 patients were included in the PEP group and 245 in the control group. DNA amplification was possible in 91.5% of the genetic variants and revealed that heterozygous carriers of CYP2C8\*3 variant were associated with a lower frequency of PEP (OR 0.2; 95% CI 0.0-0.8). Pancreatic duct cannulation (OR 3.0; 95% CI 1.4-6.6) and precut sphincterotomy (OR 3.1; 95% CI 1.2-8.0) were both found as independent risk factors for PEP.

**Conclusion:** This study showed that heterozygous carriers of the CYP2C8\*3 variant have a lower risk of developing PEP. To investigate gene variants affecting real-time diclofenac plasma levels, we have started a study in which we prospectively collect blood samples to enhance DNA quality and to analyze the existence of a correlation between PEP and reduced diclofenac levels. If this correlation is confirmed, further research is needed to investigate the optimal dosage of diclofenac in wild type CYP2C8 patients.

## Accuracy and interobserver agreement of subepithelial lesions with endoscopic ultrasonography (EUS)

C.A. Verloop<sup>1</sup>, L. Hol<sup>1</sup>, R. Quispel<sup>2</sup>, R.C. Verdonk<sup>3</sup>, P. Honkoop<sup>4</sup>, M.J. Bruno<sup>5</sup>, L.M.J.W. van Driel<sup>5</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Maastricht Ziekenhuis, Rotterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Reinier de Graaf Gasthuis, Delft, <sup>3</sup>Dept. of Gastroenterology and Hepatology, St. Antonius Ziekenhuis, Nieuwegein, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Albert Schweitzer Ziekenhuis, Dordrecht, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, Nederland

**Background:** Endoscopic ultrasonography (EUS) is recommended as the primary modality for evaluating gastrointestinal subepithelial lesions (SELs) and guiding their management. Its efficacy can be influenced by various factors, such as operator skills. This study aimed to assess the accuracy and interobserver agreement of EUS assessment of SELs.

**Methods:** Dutch gastroenterologists with an active EUS practice participated in a web-based survey and reviewed 18 EUS videos. The survey collected data on EUS equipment, biopsy technique preferences and EUS features influencing clinical decision-making in SELs. The interobserver agreement for the diagnosis and management of SELs was evaluated using Light's kappa. Accuracy in determining lesion's origin layer, EUS diagnosis and identifying neoplastic lesions were determined by the histopathologic outcome of the evaluated lesions or consensus between two EUS experts. Subgroup analyses were conducted for experts, non-experts, academic and non-academic gastroenterologists.

**Results:** Thirty-eight respondents completed the web-based survey and video review. Most respondents (63.2%) worked in non-academic teaching hospitals and have over 10 years of experience in EUS (55.3%). Nineteen respondents (50.0%) were considered experts, having performed over 1000 EUS procedures in their career. EUS for SELs accounts for less than 10% of the annual EUS workload for 78.9% of respondents. Among the 18 videos, 4 lesions originated from the m. mucosae (2<sup>nd</sup> layer), 6 lesions originated from the submucosal layer (3<sup>rd</sup> layer) and 8 lesions originated from the m. propria (4<sup>th</sup> layer). The overall accuracy for determining the layer of origin was 44.3%, for reporting the correct EUS diagnosis 47.2%. and for distinguishing neoplastic from non-neoplastic lesions 76.9%. Lesion margins and heterogeneity were identified as most determinant high-risk EUS features for clinical decision-making. The interobserver agreement for layer of origin and EUS diagnosis was fair ( $k=0.240$  and  $k=0.12$ , respectively), while for neoplastic lesions, it was moderate ( $k=0.411$ ). Similarly, the agreement for lesion management was moderate ( $k=0.408$ ). Neither experience level nor work location significantly influenced the accuracy rates.

**Conclusion:** The evaluation of SELs using EUS is inadequate for guiding management. Given the infrequent encounters with SELs, the quality benchmarks established by guidelines may not ensure the quality of EUS evaluation. The focus of EUS should be solely on identifying high-risk features to differentiate between neoplastic and non-neoplastic lesions. Nonetheless, tissue acquisition remains indispensable for establishing a definitive diagnosis.

## Colonoscopy or FIT for colorectal cancer screening: a risk-based recommendation

*L.A. van Duuren<sup>1</sup>, I. Lansdorp-Vogelaar<sup>1</sup>, <sup>1</sup>Dept. of Public Health, Erasmus MC, Rotterdam, Nederland*

**Background:** The Swiss and US colorectal cancer (CRC) screening programs offer participants a choice between colonoscopy and Fecal Immunochemical Test (FIT) screening, and rely primarily on colonoscopies. Colonoscopy resources may be better allocated by informing participants about their CRC risk and providing a corresponding recommendation for FIT or colonoscopy. Our study investigated the impact of such risk-based screening recommendations in Switzerland.

**Methods:** We used the MISCAN-Colon microsimulation model to simulate CRC screening from age 50 to 74 in the Swiss population. We assessed two approaches to risk stratification: 1) risk assessment at age 50 only; 2) risk assessments at ages 50, 60 and 70. For both strategies, 10-yearly colonoscopy was recommended if individual risk was in the highest risk quantile of all assessed individuals, and biennial FIT was recommended otherwise. Therefore, under the second strategy, some individuals were recommended to switch from FIT to colonoscopy at age 60 or 70. We evaluated both strategies using two risk assessment tools: QCancer (AUC 0.66-0.70) and a hypothetical tool (AUC 0.84). We compared the risk-based strategies to current practice (50% colonoscopy / 50% FIT), and to switching from FIT to colonoscopy based on age alone (colonoscopy for 70+). We assumed full adherence to recommendations.

**Results:** Current screening practice yielded 167 extra QALYs at 1819 colonoscopies per 1000 individuals compared to no screening. Using QCancer for risk assessment at age 50 yielded fewer QALYs (160) but required two thirds of colonoscopies (1310). Although 10-yearly risk assessment yielded more QALYs (169) at similar colonoscopies (1318), it was as effective as the age-based strategy (170 QALYs at 1311 colonoscopies). Strategies using the hypothetical risk prediction tool outperformed all other strategies (174 and 177 QALYs at 1271 and 1264 colonoscopies, respectively).

**Conclusion:** Compared to current Swiss practice, recommendations to switch from FIT to colonoscopy screening yield similar QALYs gained at reduced colonoscopy requirements. However, risk-based recommendations using QCancer could simply be replaced by age-based recommendations. Improved risk prediction tools do have the potential to outperform age-based recommendations. This could be achieved, for example, through incorporating the prior fecal hemoglobin values into risk prediction.

## Trends over time and inter-hospital variation in the primary treatment approach of T1 colon carcinomas in the Netherlands

J. Hanevelt<sup>1</sup>, F.N. van Erning<sup>2,3</sup>, W.H. de Vos Tot Nederveen Cappel<sup>4</sup>, F.P. Vleggaar<sup>5</sup>, H.L. van Westreenen<sup>6</sup>, L.M.G. Moons<sup>5</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Isala, Zwolle, <sup>2</sup>Dept. of Research & Development, Netherlands Comprehensive Cancer Organisation (IKNL), Utrecht, <sup>3</sup>Dept. of Research & Development, Catharina Ziekenhuis, Eindhoven, <sup>4</sup>Dept. of Gastroenterology, Isala, Zwolle, <sup>5</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>6</sup>Dept. of Gastrointestinal Surgery, Isala, Zwolle, Nederland

**Background:** Preferably, T1 colon carcinoma (CC) patients should have equal access to organ-preserving treatment, irrespective of the hospital of initial presentation. The aim of this study was to illustrate how the primary treatment of T1 CC has evolved over time in the Netherlands, the extent to which local resections (LR) are used as initial treatment as compared to primary surgery (PS), whether this proportion varies among hospitals, and whether changes in practice influenced 5-year overall survival.

**Methods:** In a nationwide retrospective cohort study, patients diagnosed with pT1 adenocarcinoma of the colon between 2015 and 2022, identified from the Netherlands Cancer Registry (NCR), were included. The main outcome was the distribution of LR vs. PS. Multilevel, multivariable logistic regression models were generated to estimate the probability of undergoing LR vs. PS per hospital, adjusted for case-mix variables (gender, age, ASA score, tumor location, and year of diagnosis). Hospitals were categorized into low, average, or high attitude towards LR based on the adjusted probabilities. The 5-year overall survival (OS) was calculated using cox-regression analysis adjusting for gender, age, ASA score, location, year of diagnosis, lymphovascular invasion, and differentiation grade. **Results:** In total, 9,650 patients were included from 73 different hospitals, of whom 3,999 (41.4%) received PS, and 5,651 (58.6%) underwent LR as the primary treatment. LR patients were younger (mean age 67.6 vs. 68.2,  $P < .001$ ), more often classified as ASA I-II (84.7% vs. 74.5%,  $P < .001$ ), and showed a higher frequency of left-sided CC (79.1% vs. 55.4%,  $P < .001$ ). After 2017, the national proportion of PS decreased significantly, from 53.2% in 2015 to 29.7% in 2022. The  $OR_{adj}$  for LR varied across hospitals, with six centers showing significantly lower odds for LR. However, hospitals with a low attitude towards LR also demonstrated an increasing trend in LR over time. Being a non-teaching hospital was associated with a low attitude towards LR ( $P < .001$ ), while the hospital's total exposure to T1 CCs was not ( $P = 0.08$ ). The OS did not differ between the patients treated in centers with a high attitude vs. a low attitude towards LR (crude 5-year OS 87.9% vs. 86.6%,  $HR_{adj}$  0.96, 95% CI 0.82-1.12,  $P = 0.58$ ).

**Conclusion:** Local treatment of T1 CC is increasingly favored in the Netherlands without compromising survival rates. However, there is significant variation among hospitals, which is currently largely unexplained. We hypothesize that this variation might be due to optical overstaging of T1 CCs or insufficient awareness regarding local treatment options for deeply submucosal invasive T1 CCs.

## Intestinal ultrasound identifies histopathological appendiceal inflammation in ulcerative colitis

M.J. Pruijt<sup>1</sup>, E. Visser<sup>2</sup>, F.A.E. de Voogd<sup>1</sup>, M.A. Reijntjes<sup>2</sup>, W.A. Bemelman<sup>2</sup>, G.R.A.M. D'Haens<sup>1</sup>, A. Mookhoek<sup>3</sup>, C.J. Buskens<sup>2</sup>, K.B. Gecse<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, <sup>3</sup>Dept. of Pathology, University of Bern, Bern, Zwitserland

**Background:** Growing evidence points to appendectomy as an alternative treatment for ulcerative colitis (UC). Histopathological appendiceal inflammation might be correlated with response to appendectomy. Intestinal ultrasound (IUS) is a non-invasive diagnostic modality used to visualize appendiceal inflammation. We aimed to investigate appendiceal IUS's relationship with histopathology findings in appendix resection specimens.

**Methods:** Therapy-refractory UC patients undergoing appendectomy in single center clinical trials were included. IUS parameters included appendix diameter, wall thickness, submucosal layer thickness and submucosal hyperechogenicity. Submucosal layer hyperechogenicity was quantified using the mean aerial grayscale intensity which is a numerical scale 0-255, with zero corresponding to black. To adjust for variations in depth and gain, we measured the  $\Delta$  grayscale intensity using the difference between the submucosa and muscularis propria in a perpendicular fashion. The Robarts Histopathology Index (RHI) was used to measure mucosal histological disease activity in the appendix ranging from 0-33. Appendiceal inflammation was defined as RHI >3, with at least subscores of lamina propria neutrophils or epithelium neutrophils  $\geq 1$ , or presence of ulcers or erosions.

**Results:** 37 of 55 (67.3%) included patients had a visualized appendix on IUS. The median RHI was 6 (IQR 0-12) and histopathological appendiceal inflammation was present in 21/37 (57%). Submucosal layer thickness was significantly higher (0.9 mm [0.6-1.0] vs 0.6 mm [0.4-0.7],  $p=0.04$ ), and the submucosal layer hyperechogenicity was significantly enhanced (113.5 [87.7-151.7] vs 95.4 [76.2-108.1] grayscale value,  $p=0.02$ ) in microscopically inflamed appendices. Submucosal hyperechogenicity predicted histopathological appendiceal inflammation (OR 1.03, 95% CI 1.0-1.05;  $p=0.035$ ). Submucosal thickness  $\geq 0.75$  mm diagnosed histopathological appendiceal inflammation with 66.7% sensitivity, 81.3% specificity and an AUC of 0.69 ( $p=0.046$ ). Submucosal hyperechogenicity  $>110.20$  diagnosed histopathological appendiceal inflammation with 57.1% sensitivity, 81.3% specificity and an AUC of 0.69 ( $p=0.046$ ).

**Conclusion:** IUS is able to identify patients with histopathological appendiceal inflammation who may benefit from appendectomy as treatment for UC.



## Motility at cine-MRI in stricturing Crohn's disease patients to evaluate stricture composition

K.J. Beek<sup>1</sup>, K.L. van Rijn<sup>1</sup>, C.S. de Jonge<sup>1</sup>, F.A.E. de Voogd<sup>2</sup>, C.J. Buskens<sup>3</sup>, A. Mookhoek<sup>4</sup>, E.A. Neeffes-Borst<sup>5</sup>, K. Horsthuis<sup>1</sup>, J.A.W. Tielbeek<sup>6</sup>, G.R.A.M. D'Haens<sup>2</sup>, K.B. Gecse<sup>2</sup>, J. Stoker<sup>1</sup>, <sup>1</sup>Dept. of Radiology and Nuclear Medicine, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>3</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, <sup>4</sup>Dept. of Pathology, University of Bern, Bern, Zwitserland, <sup>5</sup>Dept. of Pathology, Amsterdam UMC, Amsterdam, <sup>6</sup>Dept. of Radiology and Nuclear Medicine, Spaarne Gasthuis, Haarlem, Nederland

**Background:** Crohn's disease (CD) strictures occur in up to 50% of patients and often require surgical treatment. Strictures consist of varying degrees of inflammation and fibrosis. Imaging biomarkers which can distinguish a predominantly inflammatory from a chronic stricture are needed for optimal treatment choice. Bowel motility measured with cine-MRI is lower in strictures in CD compared to healthy small bowel segments. This study investigates if cine-MRI can distinguish predominantly chronic from predominantly inflammatory strictures using histopathological stricture composition as reference standard.

**Methods:** 2D cine-MRI with motility index was obtained in adult patients with stricturing CD who underwent surgical small bowel resection. Two pathologists assessed resection specimens to determine stricture histological subtype: predominantly inflammatory, mixed (combination of inflammatory and chronic aspects) or predominantly chronic. Differences in motility index in strictures and pre-stricture dilatations for the different histological subtypes were analyzed by means of Kruskal-Wallis test or Mann-Whitney U-test. Correlation was tested between stricture subtype and pre-stricture dilatation motility by means of spearman's rank correlation test. The area under the ROC curve was used to determine the accuracy of the motility index of pre-stricture dilatations in detecting chronic strictures.

**Results:** 29 CD patients (55.2% female) with a median age of 36.0 years [24.0-55.5] were included. 31 strictures were assessed of which 14 had pre-stricture dilatation. The median interval between MRI acquisition and surgery was 21 days [5.0-61.5]. A correlation of 0.79 ( $p < 0.001$ ) between stricture chronicity and pre-stricture dilation motility was found. A lower pre-stricture motility was found in inflammatory and mixed subtypes compared to in predominantly chronic strictures (113.1 AU [83.6-142.4] vs 272 AU [181.0-339.0],  $p = 0.008$ ). Motility index of pre-stricture dilatations for detection of chronic strictures yielded an AUC of 0.92 (95% CI 0.75-1.0,  $p = 0.01$ ). No difference was found for stricture motility among the three different histological subtypes ( $p = 0.7$ ).

**Conclusion:** Motility of pre-stricture dilatations is higher in strictures with predominantly chronicity compared to strictures with inflammatory activity. However, inflammatory, mixed and chronic strictures cannot be distinguished based on motility measured in the stricture with cine-MRI.

## **Fistula drainage assessment is correlated with improvement in Quality of Life after 26 weeks of treatment in perianal fistulizing Crohn's disease**

L.G.M. Mulders<sup>1</sup>, K.J. Beek<sup>2</sup>, J.A.W. Tielbeek<sup>3</sup>, C.J. Buskens<sup>4</sup>, J. Stoker<sup>2</sup>, R.A. van Hulst<sup>5</sup>, G.R.A.M. D'Haens<sup>1</sup>, K.B. Geerse<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Radiology and Nuclear Medicine, Amsterdam UMC, Amsterdam, <sup>3</sup>Dept. of Radiology and Nuclear Medicine, Spaarne Gasthuis, Haarlem, <sup>4</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, <sup>5</sup>Dept. of Anesthesiology, Amsterdam UMC, Amsterdam, Nederland

**Background:** Perianal fistulizing Crohn's disease (pfCD) is a debilitating phenotype that severely impacts quality of life (QoL). pfCD frequently implies a stepwise, combined medical and surgical treatment approach. Treatment goals are ideally individual and include improvement of QoL, however precise outcomes are not determined yet. Currently, most commonly used outcomes are clinical response/remission, and radiological healing, the latter most relevant to long-term disease remission. The aim of this study was to evaluate QoL in pfCD and compare it with clinical and radiological outcomes after 26 weeks of treatment.

**Methods:** In this prospective exploratory, observational cohort (AMFIBIO), we included patients with pfCD starting on anti-TNF therapy, mesenchymal stem cell injection, or hyperbaric oxygen therapy combined with surgical closure. We collected patient-reported IBD-specific (IBDQ-32) and fistula-specific (CAF-QoL) QoL outcomes. MAGNIFI-CD (remission defined as MAGNIFI-CD  $\leq 6$ ), perianal disease activity index (PDAI; response defined as  $\leq 4$ ) and fistula drainage assessment (FDA) were evaluated at baseline and week 26. Paired T tests were used to analyze changes in QoL, clinical and radiological scores. Pearson's correlation coefficient was used to correlate changes between the outcomes.

**Results:** Twenty-one patients were analyzed at week 26. At baseline, mean CAFQOL and IBDQ-32 were 58.1 (95%CI 51.0-65.2), and 145.1 (95%CI 130.7-159.4) respectively. Mean change between baseline and week 26 in CAF-QoL and IBDQ-32 was 13 (95%CI 3 - 23) and 9 (95%CI -5 - 24) respectively. FDA correlated moderately with improvement in CAF-QoL ( $\rho=0.59$ ; 95%CI 0.19 - 0.82) and moderately with improvement in IBDQ-32 ( $\rho=0.49$ ; 95%CI 0.04 - 0.77). Improvement in CAF-QoL ( $\rho=0.31$ ; 95%CI -0.20 - 0.69) and IBDQ-32 ( $\rho=0.35$ ; 95%CI -0.16 - 0.71) did not correlate with improvement in PDAI, nor with PDAI response ( $\leq 4$ ) (resp.  $\rho=0.38$ ; 95%CI -0.09 - 0.71, and  $\rho=0.40$ ; 95%CI -0.08 - 0.72). No correlation was seen between changes in CAF-QoL and MAGNIFI-CD ( $\rho=0.08$ ; 95%CI -0.39 - 0.52), or MRI remission ( $\rho=0.22$ ; 95%CI -0.26 - 0.61).

**Conclusion:** IBD- and fistula-specific quality of life scores improve after therapy at week 26 in patients with pfCD. This improvement correlates with fistula drainage assessment, however it does not correlate with PDAI and MRI outcomes.

### **Three-year oncological outcomes of endoscopic full-thickness resection for scar excision after incomplete removal of low-risk T1 colorectal cancer: results from the Dutch nationwide prospective eFTR registry**

S.C. Albers<sup>1, 2, 3</sup>, L.W. Zwager<sup>1</sup>, F.C. Bekkering<sup>4</sup>, J.J. Boonstra<sup>5</sup>, F. ter Borg<sup>6</sup>, P. Fockens<sup>1</sup>, E.A.R. Gielisse<sup>7</sup>, M. Houben<sup>8</sup>, W.R. ten Hove<sup>9</sup>, W.B. Nagengast<sup>10</sup>, L.E. Perk<sup>11</sup>, F.J. Rando Munoz<sup>12</sup>, R.M. Schreuder<sup>13</sup>, M.P. Schwartz<sup>14</sup>, H. van der Sluis<sup>15</sup>, B.W. van der Spek<sup>16</sup>, J.S. Terhaar sive Droste<sup>17</sup>, M.S. Vlug<sup>18</sup>, B. Weusten<sup>19</sup>, C. Wientjes<sup>20</sup>, T.R. de Wijkerslooth<sup>21</sup>, A. Fariña Sarasqueta<sup>22</sup>, E. Dekker<sup>1</sup>, B.A.J. Bastiaansen<sup>23</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Cancer Center, Amsterdam, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Amsterdam Gastroenterology Endocrinology Metabolism, Amsterdam, <sup>4</sup>Dept. of Gastroenterology and Hepatology, IJsselland Ziekenhuis, Capelle aan den IJssel, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Deventer Hospital, Deventer, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Rode Kruis Ziekenhuis, Beverwijk, <sup>8</sup>Dept. of Gastroenterology and Hepatology, Hagaziekenhuis, Den Haag, <sup>9</sup>Dept. of Gastroenterology and Hepatology, Alrijne Ziekenhuis, Leiderdorp, <sup>10</sup>Dept. of Gastroenterology and Hepatology, UMC Groningen, Groningen, <sup>11</sup>Dept. of Gastroenterology and Hepatology, Haaglanden Medisch Centrum, Den Haag, <sup>12</sup>Dept. of Gastroenterology and Hepatology, Nij Smellinghe Hospital, Drachten, <sup>13</sup>Dept. of Gastroenterology and Hepatology, Catharina Ziekenhuis, Eindhoven, <sup>14</sup>Dept. of Gastroenterology and Hepatology, Meander Medisch Centrum, Amersfoort, <sup>15</sup>Dept. of Gastroenterology and Hepatology, Isala, Zwolle, <sup>16</sup>Dept. of Gastroenterology and Hepatology, Noordwest Ziekenhuisgroep, Alkmaar, <sup>17</sup>Dept. of Gastroenterology and Hepatology, Jeroen Bosch Ziekenhuis, Den Bosch, <sup>18</sup>Dept. of Gastroenterology and Hepatology, Dijklander Ziekenhuis, Hoorn, <sup>19</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>20</sup>Dept. of Gastroenterology and Hepatology, OLVG, Amsterdam, <sup>21</sup>Dept. of Gastroenterology and Hepatology, Antoni van Leeuwenhoek Ziekenhuis, Amsterdam, <sup>22</sup>Dept. of Pathology, Amsterdam UMC, Amsterdam, <sup>23</sup>Dept. of Gastroenterology, Amsterdam UMC, Amsterdam, Nederland

**Background:** Scar excision with endoscopic full-thickness resection (eFTR) offers a minimally invasive alternative to completion surgery after incomplete removal of low-risk T1 colorectal cancer (CRC). However, long-term data on oncological outcomes are lacking. **Methods:** Consecutive patients undergoing eFTR scar excision after incomplete resection of low-risk T1CRC between 2015 and 2023 were selected from the Dutch prospective eFTR registry. Incomplete resection was defined as indeterminate (Rx), tumour-positive (R1, <0.1mm) or <1mm tumour-free (R0) resection margins. Lesions were considered low-risk in absence of lymphovascular invasion, poor differentiation and grade 2-3 tumour budding (if assessed). A retrospective analysis was conducted to evaluate procedural outcomes, subsequent treatment and follow-up, including endoscopy, CEA and imaging, according to local protocols. Study outcomes included the 3-year locoregional recurrence rate (LRR), distant recurrence rate (DRR), salvageable recurrence rate (SRR) and overall survival (OS). Locoregional recurrence was defined as intramural cancer recurrence and/or locoregional lymph node metastasis. Salvageable recurrence was defined as cancer recurrence that could be treated with curative intent.

**Results:** A total of 314 patients met the inclusion criteria (median age 69 years, 62% male). Initial histology showed Rx/R1 margins in 260/314 (83%) and R0 <1mm in 54/314 (17%). Macroscopic complete scar excision was achieved in 259/314 (83%) patients. Histology revealed residual cancer in 36/314 (12%) eFTR specimens (15 low-risk T1CRC, 21 high-risk T1CRC/≥T2CRC). No residual cancer was observed after R0 <1mm resection (0/54). The R0-resection rate for residual cancer was 25/36 (69%). After eFTR, 30/314 (10%) patients underwent completion surgery, of whom 9/30 (30%) had residual cancer. One patient received adjuvant chemoradiotherapy. Surveillance was initiated in the remaining 283/314 (90%) patients. In the surveillance-only group, 248/283 (88%) had at least one recorded follow-up visit, with a median follow-up of 36 months (IQR 16-52). Within this group, 203/248 (82%) had no risk factors at initial histology, while the presence of risk factors could not be adequately assessed in 45/248 (18%). In the low-risk group (n=203), the 3-year LRR, DRR, SRR and OS were 3%, 1%, 99% and 98%, respectively. In the indeterminate risk group (n=45), these were 6%, 3%, 97% and 93%.

**Conclusion:** eFTR scar excision after incomplete resection of low-risk T1CRC showed excellent 3-year oncological outcomes. However, caution should be exercised if the presence of histological risk factors cannot be adequately assessed. Further prospective studies with strict follow-up are warranted.

## **Risk factor targeted perioperative care reduces anastomotic leakage after colorectal surgery: the DoubleCheck study**

A. de Wit<sup>1, 2</sup>, B.T. Bootsma<sup>1, 2</sup>, D.E. Huisman<sup>1, 2</sup>, B. van Wely<sup>3</sup>, M.J. van Hoogstraten<sup>3</sup>, D.J.A. Sonneveld<sup>4</sup>, D. Moes<sup>4</sup>, J.A. Wegdam<sup>5</sup>, C.V. Feo<sup>6</sup>, E.G.G. Verdaasdonk<sup>7</sup>, W.J.A. Brokelman<sup>7</sup>, D.W.J. ten Cate<sup>8</sup>, T. Lubbers<sup>9</sup>, E. Lagae<sup>10</sup>, D.J.G.H. Roks<sup>10</sup>, G. Kazemier<sup>1, 2</sup>, J. Stens<sup>11</sup>, G.D. Slooter<sup>8</sup>, F. Daams<sup>1, 2</sup>, <sup>1</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Surgery, Cancer Center, Amsterdam, <sup>3</sup>Dept. of Surgery, Bernhoven Ziekenhuis, Uden, <sup>4</sup>Dept. of Surgery, Dijklander Ziekenhuis, Hoorn, <sup>5</sup>Dept. of Surgery, Elkerliek Ziekenhuis, Helmond, <sup>6</sup>Dept. of Surgery, Ospedale del Delta, Ferrara, Italië, <sup>7</sup>Dept. of Surgery, Jeroen Bosch Ziekenhuis, Den Bosch, <sup>8</sup>Dept. of Surgery, Maxima Medisch Centrum, Veldhoven, <sup>9</sup>Dept. of Surgery, MUMC+, Maastricht, <sup>10</sup>Dept. of Surgery, ZorgSaam Ziekenhuis, Terneuzen, <sup>11</sup>Dept. of Anesthesiology, Medisch Centrum Leeuwarden, Leeuwarden, Nederland

**Background:** Colorectal anastomotic leakage (CAL) is a severe complication. In order to predict and prevent its occurrence, the LekCheck study identified intraoperative modifiable risk factors for CAL: anemia, hyperglycemia, hypothermia, incorrect timing of antibiotic prophylaxis, administration of vasopressors and epidural analgesia. The DoubleCheck study aimed to introduce pre- and perioperative interventions minimizing exposure to modifiable risk factors and determine its effect on CAL.

**Methods:** This international open-labelled interventional study was performed between September 2021 and December 2023. An enhanced care bundle consisting of anemia correction, glucose measurement, attaining normothermia, antibiotics administration within 60 to 15 minutes preoperatively, refraining from vasopressors and epidural analgesia was introduced. Primary outcome was the occurrence of intraoperative risk factors just prior to the anastomosis creation. Secondary outcomes were CAL and mortality. Univariate and multivariate regression analysis were performed to establish the relationship between the enhanced care bundle, exposure to the six factors and CAL.

**Results:** The historical LekCheck group consisted of 1572 patients versus 902 in the DoubleCheck. The LekCheck group had a mean of 1.84 risk factors versus 1.63 in DoubleCheck ( $p < 0.001$ ). In the DoubleCheck significantly less patients had  $\geq 3$  risk factors ( $p < 0.001$ ). CAL was significantly lower in the DoubleCheck group (8.6% vs 6.2%,  $p = 0.039$ ). The reduction of CAL was associated with the enhanced care bundle in multivariate regression analysis (OR 1.521, 95% CI 1.01-2.29,  $p = 0.045$ ). The mortality rate did not differ significantly (1.3%, vs 0.8%,  $p = 0.237$ ).

**Conclusion:** The DoubleCheck study showed that optimization of modifiable risk factors reduced CAL in colorectal surgery.

## **Dietary factors associated with the progression of gastric intestinal metaplasia: a multicenter, prospective cohort study.**

N.E.A. Kapteijn<sup>1</sup>, F.E. Marijnissen<sup>1</sup>, S. Pluimers<sup>1</sup>, X. Guo<sup>1</sup>, W.J. den Hollander<sup>5</sup>, I.L. Holster<sup>2</sup>, C.M. den Hoed<sup>1</sup>, L.G. Capelle<sup>3</sup>, T.J. Tang<sup>1</sup>, M. Anten<sup>4</sup>, I. Prytz-Berset<sup>6</sup>, E.M. Witteman<sup>7</sup>, F. ter Borg<sup>8</sup>, J.P.W. Burger<sup>9</sup>, G.M. Fuhler<sup>1</sup>, M.P. Peppelenbosch<sup>1</sup>, M. Doukas<sup>1</sup>, E.J. Kuipers<sup>1</sup>, J. Honing<sup>1</sup>, M.C.W. Spaander<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Maastad Ziekenhuis, Rotterdam, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Meander Medisch Centrum, Amersfoort, <sup>4</sup>Dept. of Gastroenterology and Hepatology, St. Franciscus Gasthuis & Vlietland, Rotterdam, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Alrijne Ziekenhuis, Leiderdorp, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Helse, Møre og Romsdal, Noorwegen, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Catharina Ziekenhuis, Nijmegen, <sup>8</sup>Dept. of Gastroenterology and Hepatology, Deventer Ziekenhuis, Deventer, <sup>9</sup>Dept. of Gastroenterology and Hepatology Ziekenhuis Rijnstate, Arnhem

**Background:** Gastric intestinal metaplasia (GIM) is a known premalignant condition for gastric cancer (GC). Several factors have been associated with the progression to GC such as family history, smoking and increased BMI. Dietary factors such as the consumption of meat, salt and alcohol are also linked with neoplastic progression. However, the relationship between dietary factors and the progression of GIM remains poorly understood. Therefore, the aim of this prospective cohort study was to identify dietary factors for GIM progression in a low incidence country.

**Methods:** The Progression and Regression of Precancerous Gastric Lesions (PROREGAL) study prospectively included patients with GIM who underwent endoscopic surveillance from September 2009 to February 2024. GIM stage was determined by the Operative Link on Gastric Intestinal Metaplasia (OLGIM) criteria. Disease progression was based on the increase in OLGIM, comparing the baseline score to at least two follow-up (FU) endoscopies. If only one FU endoscopy was conducted, the baseline was compared to this single FU examination. Comprehensive data on family history, lifestyle factors, and dietary habits were collected through structured questionnaires. *Helicobacter pylori* (*H. pylori*) infection status was determined by pathology. Multivariate logistic regression analysis was used to determine risk factors.

**Results:** In total 336 patients met the inclusion criteria (median age: 61 years, 50.3% male, median FU of 48 months, IQR: 24) of which 38.2% showed GIM progression (7.6% to stage I, 27.6% to stage II, 46.7% to stage III and 18.1% to stage IV) and 3.2% developed high-grade dysplasia or GC. A positive family history (first or second degree) was present in 103 (30.6%) cases. Meat consumption (HR 1.2; 95% CI 1.1–1.4), salt consumption (HR 1.6; 95%CI 1.0–2.7), smoking (OR 1.6; 95%CI 1.0–2.6) and family history (OR 1.8; 95%CI 1.1–2.9) were significantly associated with precancerous lesion progression. Factors like fish intake, alcohol consumption, prepared meal consumption, fruit and vegetable intake, autoimmune gastritis (AIG), extensive GIM, vitamin intake, Body Mass Index (BMI) and history of *H. pylori* infection showed no significant association.

**Conclusion:** Meat and salt intake correlate with increased GIM progression risk in a low GC prevalence country. These findings highlight a similar causal relationship of dietary factors in gastric cancer development even in low incidence countries.

## Use of ursodeoxycholic acid can be optimized in a nationwide cohort of patients with primary biliary cholangitis

E. Werner<sup>1</sup>, M.C.B van Hooff<sup>1</sup>, M.A van de Vrie<sup>1</sup>, G.H.X Weijsters<sup>1</sup>, R.C. de Veer<sup>1</sup>, U. Beuers<sup>2</sup>, J.P.H. Drenth<sup>2</sup>, F.J.C. Cuperus<sup>3</sup>, B. van Hoek<sup>4</sup>, B.J. Veldt<sup>5</sup>, M. Klemt-Kropp<sup>6</sup>, S. van Meer<sup>7</sup>, R.C. Verdonk<sup>8</sup>, H.J. Flink<sup>9</sup>, J.M. Vrolijk<sup>10</sup>, T.J.G. Gevers<sup>11</sup>, C.Y. Ponsioen<sup>2</sup>, K. Boonstra<sup>12</sup>, F. Boersma<sup>13</sup>, H.J.M de Jonge<sup>14</sup>, F.H.J. Wolfhagen<sup>15</sup>, L.C. Baak<sup>16</sup>, S.L. Onderwater<sup>17</sup>, J.D van Bergeijk<sup>18</sup>, P.G. van Putten<sup>19</sup>, G.J. de Bruin<sup>20</sup>, R.P.R Adang<sup>21</sup>, M.N. Aparicio-Pages<sup>22</sup>, W. de Boer<sup>23</sup>, F. ter Borg<sup>24</sup>, H van Soest<sup>25</sup>, E.S. de Vries<sup>26</sup>, H.L.A. Janssen<sup>1, 27</sup>, BE Hansen<sup>28</sup>, NS Erler<sup>28</sup>, Aj Van Der Meer<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>3</sup>Dept. of Gastroenterology and Hepatology, UMC Groningen, Groningen, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Reinier de Graaf Gasthuis, Delft, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Noordwest Ziekenhuisgroep, Alkmaar, <sup>7</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>8</sup>Dept. of Gastroenterology and Hepatology, St. Antonius Ziekenhuis, Nieuwegein, <sup>9</sup>Dept. of Gastroenterology and Hepatology, Catharina Ziekenhuis, Eindhoven, <sup>10</sup>Dept. of Gastroenterology and Hepatology, Rijnstate Ziekenhuis, Arnhem, <sup>11</sup>Dept. of Gastroenterology and Hepatology, MUMC+, Maastricht, <sup>12</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, <sup>13</sup>Dept. of Gastroenterology and Hepatology, Gelre Hospitals, Apeldoorn-Zutphen, <sup>14</sup>Dept. of Gastroenterology and Hepatology, Jeroen Bosch Ziekenhuis, Den Bosch, <sup>15</sup>Dept. of Gastroenterology and Hepatology, Albert Schweitzer Ziekenhuis, Dordrecht, <sup>16</sup>Dept. of Gastroenterology and Hepatology, OLVG, Amsterdam, <sup>17</sup>Dept. of Gastroenterology and Hepatology, Diaconessenhuis, Utrecht, <sup>18</sup>Dept. of Gastroenterology and Hepatology, Ziekenhuis Gelderse Vallei, Ede, <sup>19</sup>Dept. of Gastroenterology and Hepatology, Medisch Centrum Leeuwarden, Leeuwarden, <sup>20</sup>Dept. of Gastroenterology and Hepatology, Tergooi MC, Hilversum, <sup>21</sup>Dept. of Gastroenterology and Hepatology, VieCuri, Venlo, <sup>22</sup>Dept. of Gastroenterology and Hepatology, Canisius/Wilhemina Hospital, Nijmegen, <sup>23</sup>Dept. of Gastroenterology and Hepatology, Bernhoven Ziekenhuis, Uden, <sup>24</sup>Dept. of Gastroenterology and Hepatology, Deventer Hospital, Deventer, <sup>25</sup>Dept. of Gastroenterology and Hepatology, Haaglanden Medisch Centrum, Den Haag, <sup>26</sup>Dept. of Gastroenterology and Hepatology, Isala, Zwolle, <sup>27</sup>Dept. of Gastroenterology and Hepatology, Toronto Centre for Liver Disease, Toronto, Canada, <sup>28</sup>Dept. of Epidemiology and Biostatistics, Erasmus MC, Rotterdam, Nederland

**Background:** Ursodeoxycholic acid (UDCA) is associated with an improved transplant-free survival in primary biliary cholangitis (PBC), with better outcomes in patients using  $\geq 13$  mg/kg/day. In case of incomplete biochemical response to UDCA, add-on second line therapy (SLT) has been suggested to further improve prognosis. We evaluated the use of UDCA and SLT in a nationwide Dutch cohort.

**Methods:** The Dutch PBC Cohort Study (DPCS) is a retrospective study which includes every identifiable patient with PBC in the Netherlands from 1990 onwards in all Dutch hospitals; 63 secondary and 8 tertiary centers. Use of UDCA and SLT was assessed among patients in clinical follow-up on January 1<sup>st</sup> 2019, the year prior to the start of data collection. Experience with SLT was defined as the (prior) use of fibrates and/or budesonide (both off-label available in the Netherlands), and/or obeticholic acid (exclusively bound to clinical trial enrollment). Secondary centers were categorized as low-, medium- and large volume centers according to the 33<sup>rd</sup> (n=32) and 66<sup>th</sup> (n=57) percentile of the number of PBC patients in care between 2008 and 2019.

**Results:** In total, 4351 patients were included in the DPCS of whom 2638 were in care on January 1<sup>st</sup> 2019; 2361 (89.5%) were female, mean age was 63.5 (SD 11.7) years, 2143 (81.2%) were treated in a secondary center and 495 (18.8%) in a tertiary center. The number of PBC patients in care between 2008-2019 among the secondary centers ranged from 7 to 77. Overall, 2590/2638 (98.2%) patients with PBC were prescribed UDCA. However, a recommended UDCA dose of  $\geq 13$  mg/kg/day was used by 1390/2257 (61.6%). For those using a dose of  $< 13$  mg/kg/day, the median dose of UDCA was 11.4 mg/kg/day (IQR 9.7-12.3). In secondary centers, 1084/1803 (60.1%) were prescribed  $\geq 13$  mg/kg/day versus 306/454 (67.4%) in tertiary centers (p=0.004). This was related to patient volumes in secondary centers; 118/228 (51.8%) used  $\geq 13$  mg/kg/day in low volume centers versus 402/623 (64.5%) in medium volume centers (p<0.001) and 388/952 (59.2%) in high volume centers (p<0.044). With respect to SLT, 252/2638 (9.6%) patients had been prescribed SLT on January 1<sup>st</sup> 2019; 137/2143 (6.4%) in secondary and 115/495 (23.2%) in tertiary centers (p<0.001).

Conclusion: UDCA is used by almost the entire Dutch PBC population. However, almost 40% of patients are dosed below the recommended 13 mg/kg/day, which was related to center volume. Considering the dose-dependent relation between UDCA and improved survival, there may life-years to gain with optimizing first line therapy. Prior to 2019, SLT was infrequently used among Dutch PBC patients.

## Added value of adjuvant chemotherapy in T1-2 node-positive colon cancer patients

J. Hanevelt<sup>1</sup>, J.W.B. de Groot<sup>2</sup>, E. Rademaker<sup>3</sup>, B. Zamaray<sup>3</sup>, R.M. Brohet<sup>4</sup>, E.C.J. Consten<sup>5, 6</sup>, P.J. Tanis<sup>7</sup>, L.M.G. Moons<sup>8</sup>, F.P. Vleggaar<sup>8</sup>, H.L. van Westreenen<sup>9</sup>, W.H. de Vos Tot Nederveen Cappel<sup>10</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Isala, Zwolle, <sup>2</sup>Dept. of Medical Oncology, Isala, Zwolle, <sup>3</sup>Dept. of Surgery, Isala, Zwolle, <sup>4</sup>Dept. of Epidemiology and Biostatistics, Isala, Zwolle, <sup>5</sup>Dept. of Gastrointestinal Surgery, UMC Groningen, Groningen, <sup>6</sup>Dept. of Gastrointestinal Surgery, Meander Medisch Centrum, Amersfoort, <sup>7</sup>Dept. of Gastrointestinal Surgery, Erasmus MC, Rotterdam, <sup>8</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>9</sup>Dept. of Gastrointestinal Surgery, Isala, Zwolle, <sup>10</sup>Dept. of Gastroenterology, Isala, Zwolle, Nederland

**Background:** According to the guidelines, all patients with lymph node metastases (LNM) after curative surgery for colon cancer (CC) are recommended to undergo adjuvant chemotherapy, regardless of the T-stage. However, a limited number of patients with pT1-2 CC were included in the trials that demonstrated a benefit of adjuvant chemotherapy for lymph node positive CC patients. The aim of this study was to evaluate the value of adjuvant chemotherapy in patients with lymph node-positive pT1-2 CC.

**Methods:** A multicenter retrospective cohort study was conducted, including patients who underwent surgery for T1 or T2 CC between 2014 and 2015. Patients were identified through the Dutch ColoRectal Audit (DCRA). Oncological follow-up data from the original patient records were added to the DCRA data by surgical residents affiliated with the Dutch Snapshot Research Group (DSRG). Patients were stratified by age (<75 or ≥75 years). Survival outcomes were compared with the Kaplan-Meier method. Cox proportional hazard models were used to determine risk factors associated with 5-year metastasis-free and overall survival (MFS/OS).

**Results:** Among the 2,277 surgically treated pT1-2 CC patients, 370 (16.2%) were found to have LNM, with 262 (70.8%) of those receiving adjuvant chemotherapy (CT+). Patients who did not receive adjuvant chemotherapy (CT-) were significantly older, had a higher ASA score, and experienced more frequently a complicated postoperative course, compared to the CT+ group. Among patients under < 75 years old (n = 272), oxaliplatin-based chemotherapy (CAPOX) was administered in 86.3% of cases, whereas in patients ≥ 75 (n = 97), capecitabine monotherapy was given in 42.9% and CAPOX in 38.1%. In younger patients (< 75), chemotherapy significantly improved OS (68.2% CT-group versus 91.8% in CT+ group, HR<sub>adj</sub> 0.3, 95% CI 0.1-0.6) and also had a favorable effect on MFS (83.7% in CT-group versus 91.6% in CT+ group, HR<sub>adj</sub> 0.5, 95% CI 0.2-1.09). In elderly patients (≥75 years old), the administration of adjuvant chemotherapy did not significantly affect the MFS (81.7% in the CT- group versus 84.5% in the CT+ group, HR<sub>adj</sub> 1.2, 95% CI 0.4-3.8), nor OS after correction for confounders (OS of 52.7% in the CT-group versus 77% in the CT+ group, HR<sub>adj</sub> 0.6, 95% CI 0.2-1.5). The choice of chemotherapy regimen had no influence on MFS (HR 0.6, 95% CI 0.1-3.5) or OS (HR 0.6, 95% CI 0.1-2.7).

**Conclusion:** In the largest cohort of node-positive pT1-2 CC patients currently available, no significant benefit of adjuvant chemotherapy in patients over 75 years of age could be demonstrated, irrespective of the regimen that is chosen.



## **Semiflex assisted vacuum therapy for perianal abscesses/sinuses and fistula: study protocol for a pilot study**

*A.J.M. Pronk<sup>1</sup>, E.M. Meima-van Praag<sup>1</sup>, <sup>1</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, Nederland*

**Background:** Perianal fistulas and abscesses are a common, invalidating problem for which a more effective and widely applicable treatment is necessary. Vacuum therapy has become one of the main pillars for management of a wide variety of wound healing problems. A novel catheter set was developed for vacuum therapy of perianal abscesses and fistulas: the Semiflex Dome Catheter System. With this study, we aim to test the feasibility and efficacy of the novel catheter set for vacuum therapy of perianal abscesses and fistulas.

**Methods:** This is a prospective, multicentre, pilot study. Patients  $\geq$  eighteen years with perianal abscess(es), perianal/pararectal sinus, or perianal fistula are eligible for inclusion. A Semiflex catheter is inserted under general anaesthesia in patients with a perianal fistula after closure of the internal opening or in patients with a perianal abscess/sinus. The Semiflex catheter is fixed using a Renasys Adhesive gel patch and is connected to a vacuum pump with a vacuum pressure of 125 cm H<sub>2</sub>O. Every other day, the Semiflex catheter will be exchanged for a smaller and shorter Semiflex catheter in the outpatient setting. The therapy is continued for approximately six weeks until the fistula tract or abscess/sinus is practically closed. The primary objective of the study is the feasibility of the methodology with respect to smoothness of insertion and changing of the Semiflex catheters, capability of proper fixation of the Semiflex catheter, maintaining vacuum for more than 48 hours, and compliance to the therapy in terms of pain and discomfort.

**Conclusion:** The Semiflex pilot study is a prospective, multicentre, feasibility study of patients with perianal abscesses/sinuses or perianal fistula. Once this study shows positive results on the feasibility and efficacy of the Semiflex Dome Catheter System, management of perianal fistulas and abscesses could change.

## **An Expert Delphi Consensus: Early identification of Patients at Risk of Crohn's Disease in Perianal Fistulas and Abscesses (PREFAB) and identification and management of Isolated Perianal Crohn's Disease (ipCD) - Part A, PREFAB**

L.J. Munster<sup>1,2</sup>, L.N. Hanna<sup>3</sup>, A. Dige<sup>4</sup>, L. Lundby<sup>5</sup>, A.L. Hart<sup>3</sup>, C.J. Buskens<sup>6</sup>, P.J. Tozer<sup>7</sup>, J.D.W. van der Bilt<sup>1,2</sup>,  
<sup>1</sup>Dept. of Surgery, Flevoziekenhuis, Almere, <sup>2</sup>Dept. of Surgery, Amsterdam UMC, locatie VUMC, Amsterdam,  
<sup>3</sup>Dept. of Gastroenterology and Hepatology, St. Marks Hospital, London, Verenigd Koninkrijk, <sup>4</sup>Dept. of  
Gastroenterology and Hepatology, Aarhus University Hospital, Aarhus, Denemarken, <sup>5</sup>Dept. of Surgery, Aarhus  
University Hospital, Aarhus, Denemarken, <sup>6</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, <sup>7</sup>Dept. of Surgery,  
St. Marks Hospital, London, Verenigd Koninkrijk

**Background:** In ± 10% of all Crohn's disease (CD) patients a perianal abscess (PAA) or fistula (PAF) is the manifesting symptom. The time to CD diagnosis, from PAF or PAA onset, is often very long and associated with worse outcomes. The aim of this Delphi study was to reach consensus on a clinical decision tool to help select patients with raised suspicion of CD in PAA/PAF patients, to identify underlying CD earlier and reduce the time to diagnosis.

**Methods:** A panel of international experts in the field of proctology and/or Inflammatory Bowel Disease (IBD), consisting of surgeons, gastroenterologists and radiologists, were invited to participate in this Delphi study. The first round was an electronic survey and the second round a virtual consensus meeting. In the first round, participants were asked to anonymously provide their opinion probing 1) the relevance and use of clinical characteristics ("red flags") suggestive of underlying CD, 2) the use of faecal Calprotectin (FCP) as an adjunct for screening for CD and 3) on the diagnostic work-up for IBD in PAA/PAF patients with raised clinical suspicion. In the second round, statements were paired/revised based on the feedback from the first round and presented in a final set of statements. Consensus was predefined as ≥70% agreement.

**Results:** A total of 30 experts participated in the first round and 25 in the second round (83.3%). Final consensus was reached for 29% of all statements in the first Delphi round and, after adjustments/merging, for all eleven statements (100%) in the second round. Ninety-seven percent of participants agreed that shortening of the delay in diagnosis by using a clinical decision tool could improve outcomes in patients with perianal disease as a first symptom. Consensus was reached on the red flags to be included in the clinical decision tool, on screening of all patients with any PAF (regardless of the complexity, biological behaviour and co-existent perianal symptoms) to identify CD in an early (sub)clinical phase, on referral criteria and on the diagnostic workup and follow up of patients with raised suspicion.

**Conclusion:** A clinical decision tool for early identification of CD in patients with PAA/PAF as a first symptom could shorten time to CD diagnosis and improve outcomes. Global consensus for this tool, including a practical and relevant algorithm for finding or excluding CD in patients with PAA/PAF as a manifesting sign, was reached within two rounds. This clinical decision tool will be validated in 2024 in a large, prospective multicenter study.

## Protein n-glycosylation traits can accurately distinguish pancreatic cancer cases from a heterogeneous group of controls

A.M. Bogdanski<sup>1,2</sup>, D.C.F. Klatter<sup>1,2</sup>, Y. Bi<sup>3</sup>, K.E. Clift<sup>2</sup>, J.E. van Hooft<sup>1</sup>, M.E. van Leerdam<sup>1,4</sup>, M. Wührer<sup>5</sup>, M.B. Wallace<sup>3</sup>, Y.E.M. van der Burgt<sup>5</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Mayo Clinic, Jacksonville, Verenigde Staten, <sup>3</sup>Dept. of Internal Medicine, Division of Gastroenterology and Hepatology, Mayo Clinic, Jacksonville, Verenigde Staten, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Antoni van Leeuwenhoek - Nederlands Kanker Instituut, Amsterdam, <sup>5</sup>Center for Proteomics and Metabolomics, Leids Universitair Medisch Centrum, Leiden, Nederland

**Background:** New methods are urgently needed to detect pancreatic ductal adenocarcinoma (PDAC) at an earlier stage to improve outcomes. We have previously reported three biologically distinct N-glycosylation traits (NGTs) to discriminate PDAC patients from healthy controls with an area under the curve (AUC) of 0.81-0.88. A subsequent longitudinal study revealed glycosylation differences up to 50 months prior to diagnosis, indicating potential for early detection. However, external validation is needed to determine accuracy of this biomarker panel. Moreover, it is unknown whether this panel can differentiate PDAC in a diverse group that resembles clinical practice better. Therefore, this study aims to validate the biomarker panel in a heterogeneous cohort.

**Methods:** Protein N-glycans in prospectively collected plasma samples were analyzed by mass spectrometry using a semi-automated preparation protocol.<sup>5</sup> Glycosylation profiles were determined and compared between PDAC cases and controls. The control group consisted of imaging-confirmed pancreatic disease-negative controls and individuals with benign pancreatic diseases, including (non)-mucinous cysts and pancreatitis. AUC, sensitivity and specificity were calculated to determine the accuracy of the three biologically distinct NGTs (antennarity (CA4), sialylation (A3F0L), and fucosylation (CFa)) in discriminating PDAC cases from controls.

**Results:** We included 232 individuals, of whom 42 (18.1%) were diagnosed with PDAC, and 190 (81.9%) served as controls. Among controls, 59 (31.1%) were pancreatic disease-negative and 131 (68.9%) had benign pancreatic diseases. Median age of PDAC cases and controls was 71.7 (IQR=14.5) and 65.5 years (IQR=17.6), respectively. Among PDAC cases, 19 (45.2%) were female, and 106 (52.2%) among controls. The BMI in PDAC cases and controls was equal (26.8 (IQR=7.0) and 26.6 (IQR=7.6), respectively). The AUC for the three biologically distinct traits was 0.77 (95% CI: 0.69-0.86), with a sensitivity of 0.81 (95% CI: 0.69-0.93) and specificity of 0.70 (95% CI: 0.64-0.76). When comparing PDAC cases to pancreatic disease-negative controls, the AUC was 0.83 (95% CI: 0.74-0.92), with a sensitivity of 0.79 (95% CI: 0.64-0.90) and specificity of 0.80 (95% CI: 0.69-0.90).

**Conclusion:** Distinctive NGTs from plasma protein differentiate PDAC from non-PDAC in a diverse group, consisting of cystic pancreatic diseases and pancreatitis. This panel holds potential for future early detection methods.

## **The additional value of cervical ultrasound in the detection of cervical lymph node metastases in patients with esophageal cancer; is it too soon to remove it from the standard diagnostic workup?**

*J.R. van Doesburg<sup>1</sup>, N. Schuring<sup>1</sup>, M.H.M. Vries<sup>2</sup>, P. Duvivier<sup>2</sup>, P. de Graaf<sup>2</sup>, F. Daams<sup>1, 3</sup>, M.I. van Berge Henegouwen<sup>1, 3</sup>, S.S. Gisbertz<sup>1</sup>, <sup>1</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Radiology, Amsterdam UMC, Amsterdam, <sup>3</sup>Dept. of Surgery, Cancer Center, Amsterdam, Nederland*

**Background:** In the Netherlands, external cervical ultrasound (US) was standard part of the diagnostic workup for esophageal cancer, but is no longer included in the esophageal cancer guideline. Cervical lymph node metastases from esophageal cancer, staged according to the 8<sup>th</sup> edition of the American Joint Committee on Cancer (AJCC), are considered stage IV disease and patients are generally not eligible for treatment with curative intent. This study aimed to assess the additional value of US over <sup>18</sup>F<sup>18</sup>FDG PET-CT for the detection of cervical lymph node metastases in esophageal cancer patients, to reassure justified removal of cervical US from the guideline.

**Methods:** This retrospective cohort study included all esophageal cancer patients referred to or diagnosed in the Amsterdam UMC between January 2014 and January 2021. Radiology and multidisciplinary team meeting reports were reviewed to identify patients with suspected cervical lymph node(s). Primary outcome was detection rate of cervical lymph node metastases on ultrasound and/or <sup>18</sup>F<sup>18</sup>FDG PET-CT. Golden standard was etiology based on Fine Needle Aspiration (FNA).

**Results:** This study included 768 patients, with a median age of 66 years. Patients were predominantly male (75.0%) and the majority had an adenocarcinoma (71.9%).<sup>18</sup>

<sup>18</sup>F<sup>18</sup>FDG PET-CT had a sensitivity of 91.1% (95%CI: 82.8-99.4), a specificity of 96.0% (95%CI: 94.6-97.4), a positive predictive value of 58.6% (95%CI: 47.0-70.1) and a negative predictive value of 99.4% (95%CI: 98.9-100). US had a sensitivity of 95.6% (95%CI: 89.5-101.6), a specificity of 88.1% (95%CI: 85.7-90.5), a positive predictive value of 33.3% (95%CI: 25.0-41.5) and a negative predictive value of 99.7% (95%CI: 99.3-100).

**Conclusion:** Standard US increases the number of FNA conducted for benign cervical lymph nodes, as the positive predictive value is low (33.6%). However, it does have an additional value as it identifies 8.9% of cervical lymph node metastases that were not seen on <sup>18</sup>F<sup>18</sup>FDG PET-CT.

## Prediction of hepatocellular carcinoma and liver-related events in anti-HDV positive individuals, an international retrospective cohort study (RIDE)

L.A. Patmore<sup>1</sup>, M. Spaan<sup>1</sup>, K. Agarwal<sup>2</sup>, O.M. Koc<sup>3</sup>, H. Blokzijl<sup>4</sup>, S. Brouwer<sup>5</sup>, H. van Soest<sup>6</sup>, A.G.W. van Hulzen<sup>7</sup>, H.L.A. Janssen<sup>1, 8</sup>, A.J.J. Lammers<sup>9</sup>, L. Jansen<sup>10</sup>, M.A.A. Claassen<sup>11</sup>, R.A. de Man<sup>1</sup>, R.B. Takkenberg<sup>12</sup>, R. van Dijk<sup>13</sup>, D. Posthouwer<sup>14</sup>, J. Reijnders<sup>1, 5</sup>, I. Carey<sup>15</sup>, M.J. Sonneveld<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, King's college Hospital, Londen, Verenigd Koninkrijk, <sup>3</sup>Dept. of Gastroenterology and Hepatology, MUMC+, Maastricht, <sup>4</sup>Dept. of Gastroenterology and Hepatology, UMC Groningen, Groningen, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Hagaziekenhuis, Den Haag, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Haaglanden Medisch Centrum, Den Haag, <sup>7</sup>Dept. of Internal Medicine, Isala, Zwolle, <sup>8</sup>Dept. of Gastroenterology and Hepatology, Toronto Centre for Liver Disease, Toronto, Canada, <sup>9</sup>Dept. of Infectious Diseases and Immunology, Isala, Zwolle, <sup>10</sup>Dept. of Gastroenterology and Hepatology, OLVG, Amsterdam, <sup>11</sup>Dept. of Internal Medicine, Rijnstate Ziekenhuis, Arnhem, <sup>12</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>13</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>14</sup>Dept. of Internal Medicine, MUMC+, Maastricht, <sup>15</sup>Dept. of Gastroenterology and Hepatology, King's College Hospital, Londen, Verenigd Koninkrijk

**Background:** Chronic hepatitis D (CHD) is the most severe form of chronic viral hepatitis, with a high risk of developing hepatocellular carcinoma (HCC) and other liver-related events. Risk stratification is urgently needed to guide HCC surveillance strategies and to prioritize treatment with novel antiviral agents.

**Methods:** We conducted a multicenter retrospective cohort of all consecutive anti-HDV positive patients managed at 10 academic and non-academic sites in the Netherlands and the United Kingdom. The PAGE-B score was calculated at first visit as previously published based on platelet count, age and sex, and patients were categorized as low (<10), intermediate (10-17) and high risk (>17) for HCC development. We studied the cumulative incidence of HCC and liver-related events, defined as the first of a composite of HCC, liver transplantation and liver-related mortality, in the overall study population, and across PAGE-B risk strata.

**Results:** We analyzed 269 patients; 58% was male with a median age of 38 years (IQR 32-47) at enrolment. 35.5% had cirrhosis and 45% were HDV RNA positive. In 66.5% of patients antiviral therapy was started with either a nucleo(s)tide analogue (n=164) and/or (pegylated) interferon (n=41). During a median follow-up of 4.3 years (IQR 1.5–6.4), a total of 47 first events were recorded (HCC: n=13, liver transplantation: n=27, liver-related death: n=7). The 5-year cumulative incidence of HCC and liver-related events were 3.8% (95% CI 1.05–6.5), and 15.6% (95% CI 10.5–20.7). The 5-year cumulative incidence of HCC was 0% among patients with a low PAGE-B score (n=115, 44% of cohort), compared to 3.2% in the intermediate risk group (n=121, 46% of cohort) and 25.4% in the high risk group (n=26, 10% of cohort; p<0.001). The 5-year cumulative incidence of liver-related events was 2.1% among patients with a low PAGE-B score, compared to 21.1% in the intermediate risk group and 45.5% in the high risk group (p<0.001). Findings were consistent in patients with cirrhosis at baseline; the 5-year cumulative HCC incidence was 0% in the low PAGE-B group, and 9.1% and 32.4% in the intermediate and high risk groups (p<0.001). Among HDV RNA positive patients, the 5-year cumulative HCC incidence was 0% in the low PAGE-B group compared to 6.8% and 32.5% in the intermediate and high risk groups (p<0.001).

**Conclusion:** Anti-HDV positive individuals are at high risk of adverse liver-related outcomes. The incidences of HCC were negligible among individuals without cirrhosis and among individuals with low baseline PAGE-B scores. Therefore, the PAGE-B score can be used to guide HCC surveillance strategies and potentially also for treatment prioritization.

## Low number needed to screen to detect advanced MASLD-fibrosis across the lines of care

K.C. van Son<sup>1</sup>, S. Driessen<sup>2</sup>, J.P.H. Drenth<sup>1</sup>, A.G. Holleboom<sup>2</sup>, M.E. Tushuizen<sup>3</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Vascular Medicine, Amsterdam UMC, Amsterdam, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, Nederland

**Background:** In the implementation of diagnostic algorithms for MASLD, optimal incorporation of non-invasive fibrosis tests (NITs) across the lines of care is essential, but comparative studies on this matter are limited. To this end, we initiated the NLA2 care path study, the first MASLD care path in The Netherlands, aiming to determine the optimal diagnostic algorithm to identify patients with MASLD and advanced ( $\geq$ F3) fibrosis across primary, secondary and tertiary care.

**Methods:** General physicians (GPs) and internists from four regional and one academic hospital referred patients at risk for MASLD: presence of type 2 diabetes mellitus (T2DM), adiposity, metabolic syndrome (MetS), elevated liver enzymes and/or steatosis on ultrasound. Exclusion criteria were previously diagnosed cirrhosis or other chronic liver diseases. During a single study visit, hepatic steatosis and fibrosis were assessed using FIB4 and vibration controlled transient elastography (VCTE, FibroScan®). Patients with elevated FIB4 ( $\geq$ 3.25) and/or Liver Stiffness Measurement (LSM) ( $\geq$ 8.0 kPa) were considered at high likelihood of  $\geq$ F3 fibrosis and subsequently referred to the MASLD clinic. Plasma was stored for future determination of other NITs, including Enhanced Liver Fibrosis (ELF)-test and new fibrosis signatures.

**Results:** From the first 594 participants enrolled, 334 came from a hospital setting and 260 from primary care. 27 participants were excluded due to self-reported excessive alcohol intake. 567 participants were included in the analysis. Median age was 61.0 years (52.0; 68.0). 54.3% was male and 43.9% had a BMI  $\geq$ 30 kg/m<sup>2</sup>. T2DM was present in 48.9%, with a median HbA1c of 57.5 [49.0; 67.0] mmol/mol and 78.2% met the criteria for MetS. 52.9% had a CAP  $\geq$ 290 dB/m<sup>2</sup> and 15.9% had LSM  $\geq$ 8.0 kPa, yielding a number needed to screen (NNS) of 6.3 to detect one case of  $\geq$ F3 fibrosis. The NNS in GP practices and hospitals were 11.9 and 4.6, respectively. 3.2% had LSM  $\geq$ 15.0 kPa, suggesting cirrhosis, yielding a NNS of 31.3. 63.1% had FIB4 <1.30, 33.5% had FIB4 between 1.30 and 3.25, and 0.9% had FIB4  $\geq$ 3.25. 18.8% had ELF  $\geq$ 9.8 thus yielding a NNS of 5.3 for  $\geq$ F3 fibrosis. Of note, LSM and FIB4, and LSM and ELF did not correlate (Spearman's R: 0.02 (p=0.60) and 0.10 (p=0.04)). Correlation between FIB4 and ELF was moderate (Pearson's R: 0.48 (p<0.01)).

**Conclusion:** In these first data 15.9% of participants had LSM  $\geq$ 8.0 kPa, 18.8% had ELF  $\geq$ 9.8 and 3.2% had LSM  $\geq$ 15.0 kPa. Thus, we found a remarkably low NNS of 6 or 7 to detect one case of  $\geq$ F3 fibrosis and 32 for cirrhosis in our cohort of patients at risk of MASLD across three lines of care. Of note, LSM did not correlate with FIB4 and ELF. The optimal NIT sequence remains to be determined.

## Rifaximin reduces healthcare utilization but not overall costs in patients with cirrhosis and recurrent episodes of hepatic encephalopathy

D.J. van Doorn<sup>1</sup>, K.M.A. van Eekhout<sup>1</sup>, K. de Wit<sup>1</sup>, L.C. Baak<sup>2</sup>, M. Klemm-Kropp<sup>3</sup>, B. Verwer<sup>4</sup>, P.W. Friederich<sup>5</sup>, G.J. de Bruin<sup>6</sup>, X.G. Vos<sup>7</sup>, J.P.H. Drenth<sup>1</sup>, R.B. Takkenberg<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, OLVG, Amsterdam, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Noordwest Ziekenhuisgroep, Alkmaar, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Spaarne Gasthuis, Haarlem, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Meander Medisch Centrum, Amersfoort, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Tergooi MC, Hilversum, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Dijklander Ziekenhuis, Hoorn, Nederland

**Background:** Hepatic encephalopathy (HE) is a frequent complication of cirrhosis. Rifaximin has been approved and included in guidelines for secondary prevention of HE, but there are few real-world data on its efficacy and impact on healthcare utilization. In this study, we aimed to assess the efficacy of rifaximin as secondary prophylaxis for HE in a large multicenter cohort.

**Methods:** We conducted a real-life cohort analysis from March 2010 to May 2023 in patients from 7 hospitals in the Netherlands, reflecting approximately 10% of the Dutch population, who received rifaximin as secondary prophylaxis for HE. Data were collected and compared six months before and six months after the prescription of rifaximin. The primary endpoint was the effect of rifaximin on healthcare utilization, defined as the quantification of each patient contact with the hospital, such as the number and length of admissions and emergency department visits. Secondary endpoints were the effect of rifaximin on healthcare costs.

**Results:** We included 126 patients [65% male; median age 68] with a median Model for End-stage Liver Disease (MELD) score of 15. Most common etiology was alcohol related liver disease (55%). At end of follow-up, 63% of patients were deceased, and 4% received a liver transplantation, with a median TFS of 23 months. The mean number of HE episodes after starting rifaximin was significantly lower than before starting rifaximin (0.9 ( $\pm$ 1.1) vs 2.2 ( $\pm$ 1.3);  $p < 0.001$ ). Mean healthcare utilization decreased from 6.1 ( $\pm$ 3.3) contacts in the six months to 3.3 ( $\pm$ 2.6) contacts in the six months after starting rifaximin ( $p < 0.001$ ). The mean number of hospital admissions decreased from 1.7 ( $\pm$ 1.6) admissions per patient to 1.0 ( $\pm$ 1.3) admissions after starting rifaximin ( $p < 0.001$ ). There was no difference in length of hospital admittance. The mean number of outpatient visits as well as the mean number of visits to the emergency department also decreased significantly after starting rifaximin (2.4 ( $\pm$ 1.8) visits per patient to 1.7 ( $\pm$ 1.4);  $p = 0.001$  and 0.33 ( $\pm$ 0.6) per patient to 0.15 ( $\pm$ 0.5);  $p = 0.024$  respectively). The annual costs of rifaximin are €4.555 per patient. The estimated annual costs of healthcare utilization per patient before starting rifaximin were €13.320. This was similar to the costs after rifaximin was prescribed (€13.120).

**Conclusion:** In this Dutch real-life cohort, rifaximin significantly reduced the number of episodes of HE, the number of hospital admissions as well as the number of outpatient and emergency department visits, contributing to a reduction in healthcare utilization. There was no reduction in overall costs.

## Differential prevalence and prognostic value of metabolic syndrome components among metabolic-dysfunction associated steatotic liver disease (MASLD) patients

J. Pustjens<sup>1</sup>, R.J. de Knegt<sup>1</sup>, H.L.A. Janssen<sup>1, 2</sup>, W.P. Brouwer<sup>3</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Toronto Centre for Liver Disease, Toronto, Canada, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC University Medical Center, Rotterdam, Nederland

**Background:** Metabolic-dysfunction associated steatotic liver disease (MASLD) is increasingly prevalent in the general population and a growing global health concern. This study aims to describe the cardiometabolic burden of the MASLD population and identify those at highest risk of adverse outcomes and all-cause mortality.

**Methods:** We analysed individuals with MASLD enrolled in the National Health and Nutrition Survey (NHANES) III (N=3,628) and NHANES 2017-2020 (N=2,618) studies. MASLD was defined according to the clinical practice guidelines. Hepatic steatosis was assessed by ultrasonography and controlled attenuation parameter (CAP). The primary endpoints were all-cause mortality and liver stiffness measured by Fibroscan. Significant liver fibrosis was defined as a liver stiffness measurement (LSM) of  $\geq 8$  KiloPascal (kPa). Cox regression models were adjusted for age, sex, race, marital status, education, and smoking, and results were stratified according to three age groups (20-40, 40-60, 60- 80).

**Results:** Among the total NHANES III MASLD population (median age = 48 [36 – 62], 44.8% males), 65% had  $\geq 3$  cardiometabolic disorders. Most frequent were obesity (89.1%), (pre)diabetes (66.6%) and hypo-HDL (54.7%). During a median follow-up of 22.3 [16.9 – 24.2] years, 1,405 deaths occurred. Hypertension (aHR 1.42, 95% CI 1.26; 1.61), (pre-)diabetes (aHR 1.28, 95%CI 1.09; 1.49), and hypertriglyceridemia (aHR 1.19 95% CI 1.05; 1.34) were the strongest predictors of all-cause mortality. Consistent results were obtained in the NHANES 2017-2020 cohort for the association of cardiometabolic factors and liver fibrosis among the MASLD population. Here, an increased waist circumference (OR 3.45, 95% CI 1.44; 8.25), (pre)diabetes (OR 1.90, 95% CI 1.44; 2.25) and hypertension (aHR 1.84, 95% CI 1.40; 2.43) showed the strongest associations with liver fibrosis.

**Conclusion:** MASLD patients vary greatly in their cardiometabolic burden and consequently, in their prognosis and risk for significant liver fibrosis. These results highlight MASLD as a disease spectrum rather than a single disease entity, necessitating an individualized treatment approach, also for novel therapeutic regimens assessed in clinical trials.



## **Gut microbiome dysbiosis is not associated with the presence of portal vein thrombosis in patients with end-stage liver disease**

R.R. Aleksandrova<sup>1</sup>, L.M. Nieuwenhuis<sup>1</sup>, N. Karmi<sup>2</sup>, S. Zhang<sup>2</sup>, J.C. Swarte<sup>3</sup>, J.R. Björk<sup>2</sup>, R. Gacesa<sup>2</sup>, H. Blokzijl<sup>4</sup>, R.K. Weersma<sup>2</sup>, J.A. Lisman<sup>5</sup>, E.A.M. Festen<sup>2</sup>, V.E. de Meijer<sup>1</sup>, <sup>1</sup>Dept. of Surgery, Division of HPB & Transplant Surgery, University of Groningen, University Medical Center Groningen, Groningen, <sup>2</sup>Dept. of Gastroenterology and Hepatology, University of Groningen, University Medical Center Groningen, Groningen, <sup>3</sup>Dept. of Internal Medicine, University of Groningen, University Medical Center Groningen, Groningen, <sup>4</sup>Dept. of Gastroenterology and Hepatology, UMC Groningen, Groningen, <sup>5</sup>Dept. of Surgery, University of Groningen, University Medical Center Groningen, Groningen, Nederland

**Background:** The gut-liver axis is hypothesized to contribute to the development of portal vein thrombosis (PVT) in patients with end-stage liver disease (ESLD), due to the translocation of endotoxins and proinflammatory cytokines from the gut into the portal vein. We hypothesized that a pro-inflammatory gut microbiome in ESLD patients, and elevated levels of the gut microbiota-derived metabolite trimethylamine N-oxide (TMAO) which is an established driver of thrombosis, may contribute to the development of PVT.

**Methods:** In this cross-sectional study we investigated whether differences in gut microbiome diversity, bacterial species, metabolic pathway abundances, and TMAO blood levels are associated with presence of PVT in ESLD patients. Fecal samples and data from patients with ESLD, as well as living kidney donors ('healthy controls'), were collected from our institutional biobank. We analyzed the fecal samples using Shotgun Metagenomic Sequencing. TMAO levels were measured in serum samples using a Vantera® Clinical Analyzer.

**Results:** A total of 102 ESLD patients, of which 23 had PVT, and 246 healthy controls were included. We found no significant difference in microbiome diversity between patients with PVT (median Shannon Diversity Index (SDI): 2.08), and without PVT (median SDI: 1.84; P=0.18). Both ESLD groups had lower microbiome diversity compared to healthy controls (median SDI: 2.55; both P<0.05). A Beta Diversity Analysis confirmed that the gut microbiome of ESLD patients was markedly distinct from that of healthy controls. After false discovery rate correction, *Bacteroides fragilis* and three species from the family Clostridiales were increased in abundance in ESLD patients with PVT compared to those without PVT. No altered metabolic pathways abundances were observed between both ESLD groups. Overall, altered abundances of 29% (n=49) and 51% (n=86) bacterial species, and 18% (n=96) and 35% (n=191) metabolic pathways were observed between patients with and without PVT, respectively, when compared to healthy controls. TMAO levels were higher in both ESLD patients with (3.30µm) and without PVT (3.00µm) compared to healthy controls (2.70µm) (P = 0.13 and P = 0.84 respectively), with a trend towards higher levels in patients with PVT (P = 0.19).

**Conclusion:** Although we observed a profound difference in gut microbiota composition between patients with ESLD and healthy controls, our analysis revealed minimal differences in the gut microbiome composition between ESLD patients with or without PVT. These results indicate that a gut microbiome-derived pro-inflammatory state was not associated with the presence of PVT in these patients.

## **Rhesus antagonism is associated with higher rates of non-anastomotic strictures following orthotopic liver transplantation in patients receiving donation after brain death: a single-center, retrospective cohort study**

*L.D. Broekman<sup>1</sup>, D. van der Helm<sup>2</sup>, M.E. Tushuizen<sup>1</sup>, B. van Hoek<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>2</sup>Dept. of Surgery, Division of HPB & Transplant Surgery, Leids Universitair Medisch Centrum, Leiden, Nederland*

**Background:** Complications of orthotopic liver transplantation (OLT) include non-anastomotic strictures (NAS). Incidence rates of NAS vary between 11-31% and patients require multiple cholangiographic interventions using a combination of balloon dilatation and stenting, and/or retransplantation. Risk factors include donation after circulatory death (DCD) as compared to donation after brain death (DBD) and increased (cold) ischemia times. Uncertainty remains with regard to the exact pathophysiological mechanisms involved, and immunological factors are believed to play a role as well. Expression of ABO antigens on biliary epithelial cells has been confirmed before, and ABO blood group incompatibility is associated with higher incidence of NAS. The aim of this research is to assess the effect of Rh antagonism on development of NAS after OLT.

**Methods:** This single-center, retrospective cohort study includes 678 OLTs performed between 2000-2023 (of which DBD=422, DCD=191, and machine perfused=65). The primary endpoint is NAS that required cholangiographic intervention. Rh antagonism is defined as a case in which a Rh negative recipient receives a Rh positive donor graft. Kaplan-Meier survival curves and Cox regression analyses are used for survival and risk factor analysis. Immunohistochemistry (IHC) on human liver biopsies is performed to assess the presence of Rh antigens on biliary epithelial cells.

**Results:** Total incidence of NAS was 142 (20.9%), of which 14.9% for DBD, 35.6% for DCD, and 16.9% for machine perfused grafts. 52 (7.7%) cases of Rh antagonism were identified. The overall cohort showed no significant effect of Rh antagonism on NAS development. However, when analysed separately, in the DBD cohort Rh antagonism was associated with higher rates of NAS (HR 2.749;  $p=.002$ ). This effect does not hold for transplantation after DCD.

**Conclusion:** Rh antagonism increases the risk of development of NAS after OLT with DBD.

## Longitudinal changes in liver stiffness measurements in a population-based screening cohort of 5,517 participants

J. Pustjens<sup>1</sup>, L.A. van Kleef<sup>1</sup>, R.J. de Knegt<sup>1</sup>, H.L.A. Janssen<sup>1, 2</sup>, W.P. Brouwer<sup>3</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Toronto Centre for Liver Disease, Toronto, Canada, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC University Medical Center, Rotterdam, Nederland

**Background:** The rising prevalence of steatotic liver disease highlights the importance of timely detection of advanced fibrosis and continuous monitoring to detect those who progress. Liver stiffness measurements (LSM) by transient elastography (TE) <8 kPa effectively rules out advanced fibrosis and is used as a threshold in fibrosis screening. However, the longitudinal trends of LSM in the general population remain largely unexplored. We therefore aimed to assess the proportion of participants experiencing clinically significant changes in LSM in a longitudinal population-based screening cohort.

**Methods:** This multicenter study, conducted across Spain (ES), The Netherlands (NL) and Denmark (DK), prospectively enrolled participants from the general population (ES and NL), as well as people with current or prior moderate-high alcohol consumption (DK). Participants initially underwent TE, and were invited to a follow-up investigation after 3.7 years. Clinically significant LSM change was defined as  $\geq 20\%$  and  $> 2\text{kPa}$ .

**Results:** We included 5,517 participants for baseline screening, with 3,266 participants (2,530 from the general population and 736 at risk of ALD) undergoing a follow-up investigation. Median ages for the ES, NL, and DK cohorts were 59, 71, and 59 years, respectively. Follow-up participation rate across the cohorts was 73-80% when excluding those lost to follow-up due to various reasons (not found, moved, ill, dead). Among participants with baseline LSM < 8 kPa, 3.0% increased significantly and to a final LSM  $\geq 8$  kPa, a trend consistent across all cohorts. This group more often comprised male participants with metabolic dysfunction. Within this subset, 63% increased within the 8-9.9 kPa range. Overall, 1.1% participants increased from < 8 kPa at baseline to  $\geq 10$  kPa at follow-up, most pronounced in the younger, general cohort (ES: 1.4%) and the ALD-risk cohort (DK: 1.2%) compared to the older, general cohort (NL: 0.5%). Of participants with baseline LSM  $\geq 8$  kPa, 8.8% increased significantly (ES: 6.2%, NL: 10.4%, DK: 10.0%). Conversely, 72% of participants either decreased significantly or decreased to LSM < 8 kPa, with the biggest difference between the two general cohorts (ES: 80% vs. NL 61%).

**Conclusion:** An 8 kPa liver stiffness threshold provides relevant information for clinical decision making when monitoring steatotic liver disease in the population at intervals spanning 3-4 years. Our findings indicate, that about 1% of individuals screening below this threshold will progress to stages suggestive of advanced fibrosis, whereas up to nearly 10% of patients screening above the threshold will experience a clinically significant increase in liver stiffness.

## Diagnosis of patients with fibrolamellar carcinoma: a Dutch nationwide study

A. Furumaya<sup>1</sup>, A. Gumedel<sup>1</sup>, J. de Vos-Geelen<sup>2</sup>, V. Weeda<sup>3</sup>, J. Erdmann<sup>1</sup>, R.B. Takkenberg<sup>4</sup>, M. Doukas<sup>5</sup>, J. Verheij<sup>6</sup>, <sup>1</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Gastrointestinal Oncology, MUMC+, Maastricht, <sup>3</sup>Dept. of Surgery, UZ Brussels, Brussel, België, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>5</sup>Dept. of Pathology, Erasmus MC, Rotterdam, <sup>6</sup>Dept. of Pathology, Amsterdam UMC, Amsterdam, Nederland

**Background:** Fibrolamellar carcinoma (FLC) is a rare primary liver cancer characterized by abundant eosinophilic cytoplasm and lamellar fibrotic bands. Adequate diagnosis is important for prognosis and treatment. The current study describes the diagnosis of fibrolamellar carcinoma in a Dutch historical cohort.

**Methods:** Adult patients diagnosed with FLC between 1990 and 2020, with pathology slides and clinical data available, were included through the Netherlands Cancer Registry and Automated National Pathological Anatomy Archive. Two expert hepatopathologists revised histopathology and immunohistochemistry (CD68 and CK7).

**Results:** In total, 48 adult patients, 25 (52%) male, diagnosed with FLC were included. Biopsies were available for 27 patients (56%) and resection specimens in 21 patients (44%). Upon expert review, in nine patients (19%) diagnosis FLC was unequivocally confirmed. Patients diagnosed with unequivocal FLC had a mean age of 27 years. Four additional lesions harbored characteristics of both FLC and conventional hepatocellular carcinoma (HCC). Three patients exhibited morphological features suggestive of FLC, yet with negative CD68 staining.

In the remaining 32 patients diagnosis was revised in cholangiocarcinoma (n=6, 13%) and conventional HCC (n=22, 46%). The lesions identified as conventional HCC were of steatohepatitic (n=11), scirrhous (n=7), and chromophobe (n=4) subtypes.

**Conclusion:** The presence of fibrotic bands in steatohepatitic and scirrhous HCC can lead to misdiagnosis of FLC as conventional HCC. This could have important treatment consequences as there is a tendency towards surgical treatment of FLC if feasible. Contrarily, evidence supporting the efficacy of systemic treatments for FLC remains limited. All in all, our Dutch historical cohort underlines the challenging diagnosis of FLC and emphasizes the critical role of expert review in accurate diagnosis.

## **Stereotactic body radiation therapy in early-stage hepatocellular carcinoma: a systematic review and meta-analysis**

*J. de Bruijne<sup>1</sup>, J.K. van Vulpen<sup>2</sup>, S. van Meer<sup>1</sup>, C.J.R. Verstraete<sup>1</sup>, J. Hagendoorn<sup>3</sup>, M.G.E.H. Lam<sup>4</sup>, N. Haj Mohammad<sup>5</sup>, M.L.J. Smits<sup>6</sup>, M.N.G.J.A. Braat<sup>6</sup>, M.P.W. Intven<sup>2</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>2</sup>Dept. of Radiotherapy, UMC Utrecht, Utrecht, <sup>3</sup>Dept. of Surgery, UMC Utrecht, Utrecht, <sup>4</sup>Dept. of Radiology and Nuclear Medicine, UMC Utrecht, Utrecht, <sup>5</sup>Dept. of Medical Oncology, UMC Utrecht, Utrecht, <sup>6</sup>Dept. of Radiology, UMC Utrecht, Utrecht, Nederland*

**Background:** First-line treatment strategies for (very) early-stage hepatocellular carcinoma (HCC) include liver transplantation, surgical resection and ablation. Transarterial chemo- or radioembolization (TACE/TARE) are incorporated as additional treatment strategies according to the Barcelona Clinic Liver Staging (BCLC) staging system. Although stereotactic body radiation therapy (SBRT) is currently not included in the BCLC treatment algorithm, it may be an effective and non-invasive alternative ablative strategy. We aimed to perform a systematic review and meta-analysis on oncologic outcomes and toxicity of SBRT focused on early-stage HCC treatment.

**Methods:** We performed a systematic literature search in PubMed, Embase and the Cochrane Library from inception through October 2022. Studies of SBRT targeting treatment-naïve (very) early-stage HCC (BCLC 0/A) patients were included.

**Results:** One prospective and fifteen retrospective studies were included in this review. In aggregate, SBRT in 1249 patients resulted in a 1, 2 and 3-year local control rate of 94% (95% CI: 92-97%), 89% (95% CI: 85-93%) and 79% (95% CI: 68-90%). The pooled results of the 1, 2, and 3-year overall survival rate were 90% (95% CI: 85-94%), 75% (95% CI: 63-87%) and 59% (95% CI: 45-73%), respectively. Grade  $\geq 3$  toxicity was observed in 2% of patients (95% CI: 0-4%).

**Conclusion:** This systematic review and meta-analysis showed that SBRT is an effective and safe treatment modality for treatment naïve patients with early stage HCC when first-line treatment modalities such as transplantation, resection or ablation are not feasible. The data support incorporation of SBRT as alternative treatment option in the treatment algorithm for (very) early-stage HCC in the BCLC staging system.

## Evaluation of an improved computer-aided detection system for Barrett's neoplasia on real-word imaging conditions

R.A.H. van Eijck van Heslinga<sup>1</sup>, M.R. Jong<sup>1</sup>, C. Kusters<sup>2</sup>, T. Boers<sup>2</sup>, J. van der Putten<sup>3</sup>, L. Duits<sup>1</sup>, R. Pouw<sup>1</sup>, B. Weusten<sup>4</sup>, M. Houben<sup>5</sup>, A. Alkhalaf<sup>6</sup>, F. van der Sommen<sup>3</sup>, P. de With<sup>3</sup>, J. de Groof<sup>1</sup>, J.J. Bergman<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Electrical Engineering, Eindhoven University of Technology, Eindhoven, <sup>3</sup>Dept. of Electrical Engineering, Eindhoven University of Technology, Eindhoven, <sup>4</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Hagaziekenhuis, Den Haag, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Isala, Zwolle, Nederland

**Background:** Computer Aided Detection (CADe) systems may improve detection of (pre-)malignant lesions by endoscopists. Recently, we presented a CADe system for Barrett's neoplasia. However, all training and test data originated from expert centers.

**Methods:** We aimed to develop an updated CADe system (CADe 2.0) demonstrating more robustness to the varied imaging conditions found in routine patient care. Our previously published CADe system (CADe 1.0) was trained and internally validated on a high-quality dataset originating from 15 expert centers. The updated CADe system (CADe 2.0) underwent four improvements. First, we included more heterogeneous training data comprising various quality artefacts (e.g. blurred lenses). Second, we applied data augmentation methods to address the diversity of enhancement settings used by endoscopy systems. Third, we updated the CADe system with a Vision Transformer architecture, which has shown to improve performance on lower quality endoscopic images. Finally, we transitioned our pretraining approach from semi-supervised to a self-supervised learning framework. Both CADe systems were evaluated using three prospectively collected, independent test sets. The first test set represented the true diversity and complexity encountered in daily clinical practice. This dataset comprised all videos captured from all included patients in five referral centers between 2022 and 2024 (431 BE videos from 115 patients). The second test set focused on endoscopist-dependent variation. It included three paired subsets with high, moderate and low-quality images from 122 patients. Quality was determined by factors such as esophageal expansion and mucosal cleaning. The third test set addressed endoscopist-independent variation. It contained 16 paired subsets of 396 images (122 patients). Every subset was based on a different enhancement setting of the endoscopy system.

**Results:** For test set 1, CADe 1.0 reached a sensitivity and specificity of 84% and 73%. CADe 2.0 scored 93% and 76%. For test set 2, CADe 2.0 reached higher sensitivity and specificity scores on high-quality images compared to CADe 1.0. In addition, CADe 2.0 performance loss on moderate and low-quality images was smaller. On test set 3 CADe 1.0 scores substantially varied depending on the test sets enhancement setting (82-94% sensitivity, 52-83% specificity). Variation of CADe 2.0 was limited to 91-95% and 81-88%.

**Conclusion:** The updated CADe system displayed improved performance for detection of Barrett's neoplasia in videos. More importantly, this CADe system also displayed less performance loss when exposed to lower image quality and less performance variability when confronted with differing enhancement settings.

## **Application of EUS or MRCP prior to ERCP in patients with suspected choledocholithiasis in clinical practice**

*M.J.P. de Jong<sup>1</sup>, M.M.L. Engels<sup>2</sup>, C.J. Sperna Weiland<sup>3</sup>, R. Krol<sup>4</sup>, T.M. Bisseling<sup>1</sup>, E.J.M. van Geenen<sup>1</sup>, P.D. Siersema<sup>5,6</sup>, F. van Delft<sup>1</sup>, J.E. van Hooft<sup>2</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Jeroen Bosch Ziekenhuis, Den Bosch, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Maasziekenhuis Pantein, Beugen, <sup>5</sup>Dept. of Gastroenterology, Erasmus MC, Rotterdam, <sup>6</sup>Dept. of Gastroenterology, Radboudumc, Nijmegen, Nederland*

**Background:** Patients with symptomatic cholelithiasis can be stratified according to the 2019 European Society for Gastrointestinal Endoscopy (ESGE) guideline into low-, intermediate- and high-likelihood categories for the presence of choledocholithiasis. For the intermediate group, endoscopic ultrasound (EUS) or magnetic resonance cholangiopancreatography (MRCP) is recommended to assess whether an endoscopic retrograde cholangiopancreatography (ERCP) is necessary prior to cholecystectomy. The aim of the study is to investigate adherence to the guideline for diagnostic and treatment strategy for cholelithiasis in daily clinical practice.

**Methods:** Multicenter, retrospective cross-sectional observational study of the diagnostic pathway of patients with suspicion of choledocholithiasis between 2019 and 2021. Patients were stratified according to the ESGE guideline.

**Results:** A total of 305 patients were included in the analysis and stratified into low (17%), intermediate (40%) and high (43%) likelihood of choledocholithiasis. In these three categories, 182 (60%) patients underwent ERCP. Adherence to the ESGE guideline recommendation to perform additional imaging was 59.7% overall and was the highest in the intermediate group (83.6%) ( $p < 0.001$ ). In 195 patients who underwent additional imaging, 55 ERCPs (28.2%) could be avoided.

**Conclusion:** This study shows that stratification according to the ESGE guidelines is useful to reduce the number of unnecessary diagnostic imaging procedures and ERCPs in patients with a suspicion of choledocholithiasis. It can be worthwhile to perform EUS prior the ERCP in the same session.

## **Next-generation IgA-SEQ: a comparative analysis and novel applications to uncover the role of IgA-coated bacteria**

*M. van Gogh<sup>1</sup>, J.M. Louwers<sup>2</sup>, A. Celli<sup>1</sup>, S. Gräve<sup>1</sup>, M.C. Viveen<sup>1</sup>, J. Top<sup>1</sup>, S. Bosch<sup>3</sup>, K.H.N. de Boer<sup>3</sup>, E.C. Brand<sup>2</sup>, B. Oldenburg<sup>2</sup>, M.R. de Zoete<sup>1</sup>, <sup>1</sup>Dept. of Medical Microbiology, UMC Utrecht, Utrecht, <sup>2</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, Nederland*

**Background:** The intestinal microbiota play a significant role in maintaining systemic homeostasis, but can also influence diseases such as inflammatory bowel disease (IBD) and cancer. Certain bacterial species within the intestinal tract can (chronically) activate the immune system, leading to low-grade intestinal inflammation. As a result, B-cells produce high levels of antigen-specific IgA, which is secreted into the gut, coating the immunostimulatory bacteria that initiated the response. The identification of these immunostimulatory bacteria is crucial for understanding the interaction between the intestinal microbiota and host immune system, and their role in health and disease. Flow-cytometry sorting based IgA-sequencing (IgA-SEQ) has been developed to identify the immunostimulatory, i.e. IgA-coated, fecal bacterial species. However, this technique has limited downstream applications due to the time-consuming nature, the limited number of retrieved bacteria that hinder the possibility to perform metagenomic shotgun sequencing, and impossibility to be performed under anaerobic conditions.

**Methods:** In this study, we aimed to develop an optimized next-generation IgA-sequencing approach (ng-IgA-SEQ) based on magnetic sorting to overcome the limitations of the original IgA-SEQ protocol. **Results:** We show, in various settings of complexity, ranging from simple bacterial mixtures to human fecal samples, that our magnetic 96-well plate-based ng-IgA-SEQ protocol is efficient at sorting and identifying IgA-coated bacteria. Ng-IgA-SEQ leads to a higher throughput, while at the same time reducing usage of machines, material and personnel. Furthermore, we performed a comparative analysis between different IgA-SEQ protocols, highlighting that the original flow-cytometry-sorting based IgA-SEQ approach has a lower yield of the number of sorted bacteria, thereby leading to a loss of resolution. Using the plate-based htIgA-SEQ protocol we present two novel downstream applications. Firstly, as proof-of-concept, we successfully performed metagenomic shotgun sequencing on the pre-sort and IgA-coated fractions of 10 human fecal samples. Secondly, we successfully isolated and cultured IgA-coated anaerobic bacteria by performing the isolation protocol under anaerobic conditions.

**Conclusion:** Our magnetic, 96-well plate-based, IgA-SEQ protocol efficiently identifies a great number of IgA-coated bacteria from fecal samples. This paves the way for many novel downstream applications, including culturomics, various functional assays and the possibility for metagenomic shotgun sequencing. These downstream applications are detrimental to unravel the role of immune-microbiota interactions in health and disease.



## Liver enzyme alterations during pregnancy in patients with inflammatory bowel disease

D.G. Bouwknegt<sup>1</sup>, H.C. Donker<sup>2</sup>, B. van Es<sup>3, 4</sup>, G. Dijkstra<sup>1</sup>, W.A. van Dop<sup>5</sup>, J.R. Prins<sup>6</sup>, T. Tauber<sup>4</sup>, C.J. van der Woude<sup>7</sup>, M.C. Visschedijk<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, UMC Groningen, Groningen, <sup>2</sup>Dept. of Epidemiology, UMC Groningen, Groningen, <sup>3</sup>Dept. of Biomedical Data Sciences, UMC Utrecht, Utrecht, <sup>4</sup>Dept. of Biomedical Data Sciences, MedxAI, Amsterdam, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, <sup>6</sup>Dept. of Obstetrics and Gynecology, UMC Groningen, Groningen, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, Nederland

**Background:** As inflammatory bowel disease (IBD) is often diagnosed in young adults, the disease often coincides with pregnancy. IBD is associated with liverenzymealterations both in the presence and absence of hepatotoxic medications. Physiological changes in pregnancy increase alkaline phosphatase (ALP) while transaminases (ALAT/ASAT) and bilirubin remain within normal range. However, several liverdiseases may appear during pregnancy and a structural evaluation of liver tests in IBD-pregnancy has not been explored. We investigated liverenzymealterations in pregnant women with IBD.

**Methods:** All female IBD-patients treated in 3 Dutch clinics from the inception of the respective EPD to 2022 were included. Patients with a known liverdisease were excluded. Data was extracted from the EPD, incl. patient- and diseasecharacteristics, labvalues, medications and pregnancyoutcomes. Bayesian analyses were used to estimate the percentual difference in liverenzymes when various variables were present versus when they were not. Unlike frequentist analyses, in Bayesian analysis probability is depicted with 95% high-density intervals (HDI), containing 95% of the posterior distribution. Group comparisons included pregnant vs not pregnant, pregnancy with vs without an adverse outcome, ulcerative colitis (UC) vs Crohn's disease (CD) and flares vs remission. To evaluate the representativeness of the model, labvalues with known patterns during pregnancy and flares (hemoglobin (Hb) and albumin) were also included.

**Results:** Data was collected on 4929 (60.7% CD and 36.9% UC) patients, of whom 603 had been pregnant, resulting in 967 pregnancies. ALAT and ASAT measured during pregnancy were 22% and 13% lower when compared to measurements taken outside of pregnancy. Gamma-glutamyl transpeptidase (GGT) reduced by 36% during pregnancy. ALP increased by only 6.7% during pregnancy. Further analysis focusing solely on ALP-measurements during the 3rd trimester revealed a 67.4% rise. HDIs for measurements taken during pregnancies with vs without an adverse outcome centered around 0. As expected, Hb and albumin were decreased during pregnancy and flares.

**Conclusion:** Both ALAT and ASAT reduced considerably during pregnancy in patients with IBD. The decrease is in line with changes seen in healthy pregnancies. Therefore it is suggested to use an upper normal limit about 20% lower when compared to non-pregnant individuals. As would be expected in the presence of placental ALP production, ALP rose substantially in the final trimester. We did not find associations between enzyme-levels and adverse pregnancy outcomes. Knowledge on the changes in transaminases, GGT and ALP during pregnancy will help in timely recognition of liver disease.

## **Persistent risk of hepatocellular carcinoma despite improvement of liver stiffness in chronic hepatitis B patients with advanced fibrosis treated with nucleo(s)tide analogues – an international retrospective cohort study**

L.A. Patmore<sup>1</sup>, L.Y. Liang<sup>2</sup>, G. Papatheodoridis<sup>3</sup>, M. Kilany<sup>4</sup>, A. Furquim D'Almeida<sup>5</sup>, V.W.S. Wong<sup>6</sup>, M. Papatheodoridis<sup>3</sup>, T. Vanwolleghem<sup>5</sup>, P. Honkoop<sup>7</sup>, H. Blokzijl<sup>8</sup>, O.M. Koc<sup>9</sup>, H.L.A. Janssen<sup>1,4</sup>, M. Kramer<sup>9</sup>, J. de Bruijne<sup>10</sup>, A. Kaewdech<sup>11</sup>, R.A. de Man<sup>1</sup>, R.B. Takkenberg<sup>12</sup>, G.L. Wong<sup>13</sup>, J.J. Feld<sup>4</sup>, M.J. Sonneveld<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>2</sup>Dept. of Medical Statistics, The Chinese University of Hong Kong, Hong Kong SAR, Hongkong, <sup>3</sup>Dept. of Gastroenterology and Hepatology, National and Kapodistrian University of Athens, Laiko General Hospital Athens, Athens, Griekenland, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Toronto Centre for Liver Disease, Toronto, Canada, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Antwerp University Hospital, Antwerpen, België, <sup>6</sup>Dept. of Medicine, The Chinese University of Hong Kong, Hong Kong SAR, Hongkong, Hongkong, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Albert Schweitzer Ziekenhuis, Dordrecht, <sup>8</sup>Dept. of Gastroenterology and Hepatology, UMC Groningen, Groningen, <sup>9</sup>Dept. of Gastroenterology and Hepatology, MUMC+, Maastricht, <sup>10</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>11</sup>Dept. of Gastroenterology and Hepatology, Prince of Songkla University, Hatyai, Thailand, <sup>12</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>13</sup>Dept. of Gastroenterology and Hepatology, The Chinese University of Hong Kong, Hong Kong SAR, Hongkong

**Background:** Chronic hepatitis B (CHB) patients with advanced fibrosis are at high risk for hepatocellular carcinoma (HCC). Liver stiffness measurement (LSM) correlates with liver fibrosis in untreated patients, and is often used to monitor changes in severity of liver disease over time. However, the association between on-treatment LSM and HCC risk is yet unknown.

**Methods:** We conducted an international multicenter retrospective cohort study of CHB patients with advanced fibrosis (defined as  $\geq$ F3 based on liver biopsy or LSM) with available on-treatment LSM after at least 3 years of follow-up, at sites in Belgium, Canada, Hong Kong, the Netherlands, and Thailand. On-treatment LSM was categorized according to cut-offs validated against METAVIR fibrosis grades as  $<6$  kPa ('F0-1'), 6-9 kPa ('F2') and  $>9$  kPa ('F3-4'). We assessed the association between on-treatment LSM with subsequent HCC development.

**Results:** We analyzed 562 patients with a median age of 50 years (inter quartile range [IQR] 41 – 58), 75.6% was male and the majority (69.2%) was Asian. The median baseline HBV DNA was 5.5 log IU/mL (IQR 3.9 – 6.6) and 62.8% had F4 at baseline. The median time between baseline fibrosis assessment and on-treatment LSM was 4.7 years (IQR 3.6 - 6.6). On-treatment LSM decreased to  $<6$  kPa in 209 (37.2%) patients, to 6-9 kPa in 174 (31.0%) patients and remained  $>9$  kPa in 179 (31.9%) patients. During a median follow-up of 6.8 years after the on-treatment LSM, 56 patients developed HCC, 18 (32.2%) of whom had an on-treatment LSM  $<6$  kPa. The 5-year cumulative HCC incidence was comparable across on-treatment LSM strata; 4.4% for  $<6$  kPa, 5.5% for 6-9 kPa and 5.8% for  $>9$  kPa ( $p=0.300$ ). In multivariable analysis, only higher age (adjusted hazard ratio [aHR] 1.055) and lower platelet count (aHR 0.984) were associated with subsequent HCC development, whereas on-treatment LSM was not (aHR 0.967,  $p=0.167$ ).

**Conclusion:** The majority of CHB patients with advanced fibrosis experiences a decrease in LSM during antiviral therapy. This improvement in LSM was not associated with a reduction in the risk of HCC. On-treatment LSM should therefore not be used to guide HCC surveillance strategies, nor as a surrogate endpoint in clinical trials.

## **MASLD and metALD: the amount of liver fat and number of cardiometabolic risk factors in relation to the risk of type 2 diabetes and cardiovascular disease**

G. Alblas<sup>1</sup>, J.H.P.M. van der Velde<sup>2</sup>, M.E. Tushuizen<sup>3</sup>, J.W. Jukema<sup>4</sup>, H.J. Lamb<sup>5</sup>, F.R. Rosendaal<sup>2</sup>, B. Van Hoek<sup>3</sup>, R. de Mutsert<sup>2</sup>, M.J. Coenraad<sup>3</sup>, <sup>1</sup>Dept. of Internal Medicine, Leids Universitair Medisch Centrum, Leiden, <sup>2</sup>Dept. of Epidemiology, Leids Universitair Medisch Centrum, Leiden, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>4</sup>Dept. of Cardiology, Leids Universitair Medisch Centrum, Leiden, <sup>5</sup>Dept. of Radiology, Leids Universitair Medisch Centrum, Leiden, Nederland

**Background:** Metabolic dysfunction associated steatotic liver disease (MASLD) and metabolic alcohol-associated liver disease (MetALD), defined as the presence of liver fat in combination with at least one of five cardiometabolic (CM) risk factors and alcohol consumption (max 50 gram/day (women), 60 gram/day (men)), is associated with an increased risk of type 2 diabetes and cardiovascular diseases. It is unclear to what extent increasing amounts of liver fat or CM risk factors may result in further risk increases. We aimed to examine the associations between increasing amounts of liver fat and the number of CM risk factors with the occurrence of cardiometabolic disease (CMD).

**Methods:** In the Netherlands Epidemiology of Obesity study, a population-based prospective cohort study, liver fat content was assessed at baseline using proton magnetic resonance spectroscopy in middle-aged population with overweight. During up to 10 years follow-up, incident CMD (type 2 diabetes, myocardial infarction, stroke, TIA) were collected via medical records. Cox regression was used to examine associations, adjusted for age, sex, education, ethnicity, alcohol use, physical activity and total body fat.

**Results:** The overall population (50% women) had a mean age (95% CI) of 55 (55-56) years, BMI of 29.2 (29.0-29.4) kg/m<sup>2</sup>, liver fat content of 8.1 (7.7-8.6)%. After exclusion of preexisting diabetes and cardiovascular disease, 139 new cases of CMD occurred, which resulted in an adjusted hazard ratio (HR, 95% CI) of 2.07 (1.5-3.3) for those with MASLD/metALD, compared with those without MASLD. Participants with liver fat content between 2.5-5% had an adjusted HR 1.02 (0.54-1.93), between 5-10% 1.86 (1.04-3.31), for 10-15% 1.89 (0.96-3.72), for 15-20% 1.98 (0.96-4.05), for 20-25% 2.27 (1.04-4.98), for 25-30% 2.44 (0.93-6.44), and for those with liver fat content of 30% or more it was 3.23 (1.57-6.63) for the occurrence of CMD, compared to those with a liver fat content between 0 and 2.5%. Having MASLD/metALD with one CM criterion resulted in an adjusted HR of 0.98 (0.42-2.24) for the occurrence of CMD, compared with those without MASLD. The adjusted HR with two criteria was 2.18 (1.32-3.58), three 2.58 (1.49-4.46) and four 2.98 (1.68-5.32).

**Conclusion:** Participants with MASLD/metALD have a 2-fold increased risk of CMD compared with participants without MASLD. Liver fat content above 5% resulted in an increased HR of the occurrence of CMD up to 3 fold for >30% liver fat. Having four CM criteria resulted in a 3 fold increased risk for the occurrence of CMD. Showing that the amount of liver fat and the number of CM risk factors matter, therefore a multidisciplinary approach to treat the CM risk factors is essential.

## **Body composition parameters derived from diagnostic CT scans are associated with worse overall survival in various groups of patients with pancreatic ductal adenocarcinoma**

*K.J.H. Wijsman<sup>1, 2</sup>, D.C.F. Klatter<sup>1, 2</sup>, A.M. Bogdanski<sup>1, 2</sup>, A.D. Weston<sup>3</sup>, J.E. van Hooft<sup>2</sup>, M.E. van Leerdam<sup>2, 4</sup>, M.B. Wallace<sup>5</sup>, Y. Bi<sup>5</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Mayo Clinic, Jacksonville, Verenigde Staten, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>3</sup>Dept. of Biomedical Data Sciences, Mayo Clinic, Jacksonville, Verenigde Staten, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Antoni van Leeuwenhoek - Nederlands Kanker Instituut, Amsterdam, <sup>5</sup>Dept. of Internal Medicine, Division of Gastroenterology and Hepatology, Mayo Clinic, Jacksonville, Verenigde Staten*

**Background:** Pancreatic ductal adenocarcinoma (PDAC) is one of the deadliest malignancies. In this setting, gaining a better understanding of factors influencing survival is urgently needed in order to tailor treatment. Previous research suggests that abdominal body composition at diagnosis – defined as the quantity and density of skeletal muscle, visceral adipose tissue and subcutaneous adipose tissue – may have prognostic value. Therefore, this study aims to investigate the association of various CT-based body composition parameters with survival in PDAC patients.

**Methods:** Patients diagnosed with PDAC between 2000 and 2020 were identified and diagnostic CT scans were retrieved. Body composition was evaluated using an automated abdominal segmentation algorithm that three-dimensionally measured tissue volume and density in a 20 cm section surrounding vertebra L3. Multivariable Cox regression analyses (adjusted for age, sex, race, tumor localization, tumor stage, BMI, and comorbidities) were conducted, and hazard ratios (HR) were generated.

**Results:** A total of 1666 patients were included, 56.3% male, median age 69 (IQR 61 – 76) years old. Median follow-up was 9.5 months (IQR 3.7 – 20.8). Median survival was 28.3 months for patients undergoing resection (n = 509), 9.7 months for patients who received palliative systemic or radiation therapy (n = 439), and 4.8 months for patients not undergoing tumor-targeted treatment (n = 718). In the surgery subgroup, sarcopenic obesity (HR 1.70, p = 0.039) and myosteatorsis (the intramuscular infiltration of adipose tissue, HR 1.43, p = 0.018) were significantly associated with worse survival, while more subcutaneous adipose tissue was significantly associated with better survival (HR 0.98 for every 10 cm<sup>2</sup> increase, p = 0.015). In the palliative treatment subgroup, higher skeletal muscle density was significantly associated with better survival (HR 0.88 for every 10 Hounsfield Units increase, p = 0.018). In the subgroup without treatment, obesity was significantly associated with worse survival (HR 1.23, p = 0.032), while higher skeletal muscle density (HR 0.92 for every 10 Hounsfield Units increase, p = 0.047) and more visceral adipose tissue (HR 0.99 for every 10 cm<sup>2</sup> increase, p = 0.020) were significantly associated with better survival.

**Conclusion:** Among subgroups of PDAC patients who underwent surgery, received palliative treatment, or underwent no tumor-targeted treatment, several body composition parameters were significantly associated with better or worse survival. This highlights the significance of body composition, which can be evaluated through routinely performed diagnostic CT scans, in enabling a more patient-specific treatment approach.

## **Multiplex spatial omics analysis reveals changes in immune-epithelial crosstalk during inflammation and dysplasia development in chronic ibd patients**

*E. Floor<sup>1</sup>, Y. Vercoolen<sup>1</sup>, B. Oldenburg<sup>2</sup>, <sup>1</sup>Center for Experimental Molecular Medicine (CEMM), UMC Utrecht, Utrecht, <sup>2</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, Nederland*

**Background:** Patients with long-standing inflammatory bowel disease (IBD) face an increased risk of developing colitis-associated cancer (CAC). However, although prolonged inflammation due to IBD seems to be involved in pathogenesis, specific molecular changes that contribute to CAC remain unknown.

**Methods:** We applied digital spatial RNA profiling (DSP), RNAscope and imaging mass cytometry (IMC) to examine paired uninflamed, inflamed, and early dysplastic mucosa of patients with IBD to document differences between these states and map potential molecular changes leading to the disease phenotype.

**Results:** We observed robust Type 3 (IL-17) responses during inflammation, accompanied by elevated JAK-STAT signaling and phosphorylated STAT3 (P-STAT3) levels, with both inflamed and dysplastic mucosa displaying immune cell activation. We detected higher stromal P-STAT3 in uninflamed and inflamed mucosa of patients who eventually developed dysplasia. We also noted that CD8a<sup>+</sup> T cells did not infiltrate inflamed or dysplastic epithelial regions in these patients, while control patients showed elevated CD8a in inflamed mucosa.

**Conclusion:** Taken together, our study reveals distinct inflammatory patterns throughout CAC development, marked by an activated IL-17 pathway, engaged STAT3, and diminished cytotoxic T cell infiltration.

## Development and validation of the IBD LIFE questionnaire: a world-wide patient-centred approach

J. van Oostrom<sup>1</sup>, S. Anjie<sup>1</sup>, J. Horrigan<sup>2</sup>, N. Karimi<sup>3</sup>, B. Adi<sup>4</sup>, G. Ganesh<sup>4</sup>, S.K. Yang<sup>5</sup>, J. Lasa<sup>6</sup>, L. Parks<sup>6</sup>, C. Broër<sup>7</sup>, A. de Kruijf<sup>8</sup>, P. Olivera<sup>6</sup>, B.D. Ye<sup>5</sup>, R. Banerjee<sup>4</sup>, L. Peyrin-Biroulet<sup>9</sup>, S. Connor<sup>10</sup>, C. Siegel<sup>2</sup>, K.B. Gecse<sup>1</sup>, G.R.A.M. D'Haens<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Dartmouth hitchcock medical center, Lebanon, Verenigde Staten, <sup>3</sup>Dept. of Public Health, South West Sydney Clinical Campuses, UNSW Medicine and Health, UNSW Sydney, Sydney, Australië, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Asian institute of Gastroenterology, Hyderabad, India, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Asan medical center, University of Ulsan College of Medicine, Seoul, Zuid-Korea, <sup>6</sup>Dept. of Gastroenterology and Hepatology, IBD Unit, Gastroenterology Section, Department of Internal Medicine, Centro de E, Buenos Aires, Argentinië, <sup>7</sup>Dept. of Scientific Research, Faculty of Sociology, University of Amsterdam, Amsterdam, <sup>8</sup>Dept. of Scientific Research, Faculty of Science, Methodology and Applied Biostatistics, Free University, Amsterdam, <sup>9</sup>Dept. of Gastroenterology and Hepatology, Department of Gastroenterology, University of Lorraine, CHRU-Nancy, 54000, Nancy, Frankrijk, <sup>10</sup>Dept. of Gastroenterology and Hepatology, South West Sydney Clinical Campuses, UNSW Medicine and Health, UNSW Sydney, Sydney, Australië

**Background:** For patients with inflammatory bowel diseases (IBD), the ultimate treatment goal is to live a “normal life.” However, no patient-reported outcome measurement (PROM) exists yet to measure this. Moreover, most PROMs were developed by western healthcare professionals, lacking a global, patient-centred approach. Through a world-wide patient-centred approach, we aimed to develop and validate a PROM that identifies and measures normality of life for patients with IBD, the “IBD LIFE.”

**Methods:** IBD patients without an ostomy, pouch or comorbidities could participate. The development phase included 6-10 Crohn's disease (CD) and 6-10 ulcerative colitis (UC) patients from each participating country (Argentina, Australia, India, the Netherlands, South-Korea and the USA), and comprised (i) qualitative interviews, (ii) a Delphi round, (iii) a focus group, (iv) pilot-testing and (v) cross-cultural translation. For validation, 200 IBD patients are recruited per language (100 CD, 100 UC). At baseline (BL), we assessed clinical disease activity (CD: Harvey Bradshaw Index (HBI); UC: Simple Clinical Colitis Activity Index (SCCAI)) and asked patients to complete the IBD LIFE, the IBDQ and SF-36. Additionally, we asked 30 patients per language to complete the IBD LIFE, IBDQ and IBD control 2 weeks later (W2). Internal consistency was assessed using Cronbach's  $\alpha$ . Test-retest reliability was assessed through the intraclass correlation coefficient (ICC) by comparing IBD LIFE scores at BL and W2 in patients with stable QoL (defined as <10% IBDQ score difference and the IBD control question 2 answered “no change”). Construct validity was assessed at BL through Spearman's correlation coefficients between the IBD LIFE and the IBDQ, SF-36, HBI and SCCAI.

**Results:** The IBD LIFE consists of 23 questions across 5 categories: physical items, activities, social items, psychological items and circumstances.

We report on the first 364 patients included for validation (200 Dutch, 100 Spanish and 64 English patients, 187 UC and 177 CD, median disease duration 10 years [5-18]; CD: median HBI 2 [1-5]; UC: median SCCAI 1 [0-2]). PROM response percentage was 85%. 38 patients completed W2 of whom 71% had stable QoL. The IBD LIFE showed excellent internal consistency ( $\alpha = 0.95$ ), good test-retest reliability (ICC = 0.94 [95% CI 0.88-0.98]) and good construct validity (strong correlation with IBDQ ( $r = 0.90$ ) and SF-36 ( $r = 0.84$ ); moderate correlation with HBI ( $r = 0.58$ ) and SCCAI ( $r = 0.54$ )).

**Conclusion:** The IBD LIFE is a novel, valid and reliable PROM that has been developed through a rigorous process with maximal patient involvement. Further validation is ongoing, as well as responsiveness analyses and cross-cultural validation.

## Capillary self-sampling at home for monitoring of IBD patients: a feasibility study

G.S. Schuurman<sup>1</sup>, W. T. Groenestege<sup>2</sup>, M.M.C. Hirdes<sup>1</sup>, H.H. Fidder<sup>1</sup>, B. Oldenburg<sup>3</sup>, S. De Roock<sup>4</sup>, F.D.M. van Schaik<sup>3</sup>, <sup>1</sup>Dept. of Gastroenterology, UMC Utrecht, Utrecht, <sup>2</sup>Dept. of Clinical Chemistry, UMC Utrecht, Utrecht, <sup>3</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>4</sup>Dept. of Pediatrics, UMC Utrecht, Utrecht, Nederland

**Background:** Recent advancements in remote healthcare aim to improve the management of inflammatory bowel disease (IBD) patients by reducing the number of hospital visits. Capillary sampling at home has the potential to integrate laboratory diagnostics in the remote monitoring of IBD patients with eHealth technologies. The IBD Lab@Home study evaluated the feasibility of capillary blood sampling at home for disease monitoring in IBD patients. This is the first study to assess a home-sampling method for the routine measurement of biochemical and hematologic parameters at more than one timepoint.

**Methods:** In this prospective cohort study, 23 IBD patients with an indication for frequent blood monitoring performed finger prick-based capillary blood sampling in the hospital and at home on timepoint 1 (T1, after 2 to 6 weeks), and at timepoint 2 (T2, after 4 to 12 weeks), according to standard care. Blood samples were returned to the diagnostic laboratory at the hospital, where biochemical and hematological parameters were determined. A successful blood sample was defined as a) transported in <48 hours, b) of sufficient sample quality, and c) a sufficient volume to perform the biochemical analysis ( $\geq 500$   $\mu\text{L}$  for the EDTA tube, and  $\geq 300$   $\mu\text{L}$  for the LH tube). Patients completed a patient experience questionnaire after each blood sample.

**Results:** A total of 20/23 (87%) patients completed the study (median age: 42 (30 – 52) years, CD: 18/23 (78%), CU: 5/23 (22%)). Seventeen out of 21 (81%) blood samples at T1 and 17 out of 20 blood samples at T2 (85%) were successfully withdrawn and analyzed. Fifty-six percent of patients preferred capillary blood sampling at home over venous sampling at the hospital at both T1 and T2. At T1 and T2, 61% and 65% respectively of the patients were satisfied with the new method. Younger patients tended to express higher satisfaction and preference rates for home testing. Most difficulties were encountered with the collection of a sufficient sample volume, and catching the blood drops/blood in the small tube. Sixty-five percent of the patients reported a better performance with blood sampling at T2 compared to T1.

**Conclusion:** This study explored the feasibility of capillary blood sampling at home for routine disease monitoring in IBD patients. Over half of the patients preferred this novel method over venous sampling at the hospital. Patients' satisfaction tended to be higher in younger patient groups. Further device optimization, aimed at facilitating improved blood flow, and careful consideration of individual preferences are crucial for future implementation.

## **Octreotide does not prevent delayed bleeding after endoscopic papillectomy: a propensity score matching analysis**

*C.M. van de Leur<sup>1</sup>, F.P. Vleggaar<sup>1</sup>, P. Didden<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, Nederland*

**Background:** Endoscopic papillectomy (EP) is a commonly used procedure for treating ampullary adenomas, providing a minimally invasive alternative to surgery. However, EP is associated with significant risks of adverse events, especially delayed bleeding. Octreotide, a somatostatin analog, modulates splanchnic blood flow and reduces pancreatic and bile secretions. This study aims to evaluate the effect of octreotide on preventing delayed bleeding following EP.

**Methods:** This retrospective cohort study analyzed all consecutive patients undergoing EP for ampullary tumors in one referral center from 2015 to 2023. The primary outcome was delayed bleeding, defined as any post-procedural bleeding necessitating hospitalization, re-intervention, or emergency department visit. Immediate post-EP octreotide administration (50 µg/hour intravenously for at most 24 hours) was introduced as a protocol change in 2022. The impact of octreotide prophylaxis on delayed bleeding was assessed using 1:1 propensity score matching (with a maximum difference of 0.1). Matching criteria included primary or repeat EP, antiplatelet/anticoagulant use, and lesion size.

**Results:** A total of 69 ampullary lesions in 50 patients were resected, achieving complete endoscopic resection in 92% of primary procedures (median lesion size 15mm, IQR 10-31.5mm). EP-related adverse events occurred in 45% of procedures, including delayed bleeding in 28% and pancreatitis in 17% of cases. A matched cohort analysis of 34 procedures (17 with octreotide and 17 controls) revealed no significant differences in baseline characteristics (median lesion size 18mm, IQR 15-30mm vs. 15mm, IQR 10-35mm). The incidence of delayed bleeding was 41% (7/17) in both groups, with similar rates of endoscopic intervention (12%). Angiographic embolization was required in 2 cases of the control group and none of the octreotide group. Transfusion rates were comparable between the groups (12%). There were no differences in other critical complications, such as pancreatitis (18% vs. 12%,  $p=1.000$ ) and perforation (18% vs. 6%,  $p=0.601$ ).

**Conclusion:** EP carries a significant risk of adverse events. Octreotide prophylaxis does not seem to have any beneficial effect in reducing delayed bleeding.



## **Predictive value of the Mobile Health Index in inflammatory bowel diseases: six-month outcomes of a prospective cohort study**

*L.J.M. Koppelman<sup>1</sup>, N.M. Althuis<sup>1</sup>, P.W.J. Maljaars<sup>1</sup>, P.W. Voorneveld<sup>1</sup>, R.J. Jacobs<sup>2</sup>, A.E. van der Meulen-de Jong<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Alrijne Ziekenhuis, Leiderdorp, Nederland*

**Background:** Patients with inflammatory bowel disease (IBD) require long-term care. To optimise future healthcare delivery, identifying patients suitable for remote monitoring is crucial. Patient-reported outcome measures integrated within eHealth systems, such as the 4-item Mobile Health Index (mHI), offer potential for predicting disease activity. This study explores the predictive value of the mHI within the e-health system used at a Dutch university medical centre.

**Methods:** This prospective cohort study tracks IBD patients within the e-health system for 24 months. Patients are monitored using standard of care and the mHI. These preliminary results focus on assessing the predictive value of the mHI above a validated cut-off value at baseline for predicting a flare within six months. Sensitivity, specificity, and predictive values are calculated alongside simple logistic regression and Kaplan-Meier analyses.

**Results:** Out of 319 patients (56.7% Crohn's Disease (CD), median age 43 years, median disease duration 15 years), 89 exhibited biochemical disease activity (FCP > 150 µg/g and/or CRP > 5 mg/L) at baseline and were excluded from the current analysis. Among the 230 patients in remission at baseline, 51 (21.3%) scored above the mHI cut-off point at baseline and 79 (34.3%) experienced a biochemical flare-up within six months of follow-up. The relative risk of experiencing a disease flare in Ulcerative Colitis (UC) patients with a baseline mHI score above the cut-off point was 2.44 ( $p = 0.04$ ) with sensitivity of 42.1%, specificity of 82.4%, positive predictive value of 40.0%, and negative predictive value of 83.6%. In CD patients, the relative risk was 1.62 ( $p = 0.39$ ) with sensitivity of 38.5%, specificity of 73.4%, positive predictive value of 14.7%, and negative predictive value of 90.9%. Logistic regression analysis revealed an association between a mHI score above cut-off point and disease flares in UC patients (OR = 3.394, 95% CI: 1.110-10.330,  $p = 0.03$ ), whereas in CD patients, this association was not found (OR = 1.724, 95% CI: 0.487-5.603,  $p = 0.37$ ). Kaplan-Meier analysis demonstrated a longer flare-free survival in UC patients with a baseline mHI score below cut-off point ( $p = 0.03$ ), while no difference was observed in CD patients ( $p = 0.14$ ).

**Conclusion:** This study indicates that the mHI could be a valuable tool for predicting disease activity, and particularly quiescent disease, in UC patients. These results underscore the potential utility of the mHI in identifying patients suitable for remote monitoring. Further research should explore repeated mHI measurements in combination with biomarkers like calprotectin for a more comprehensive approach.

## **The predictive value of Intestinal ultrasound for treatment response in IBD: a systematic review**

*J.M.B.W. Vos<sup>1</sup>, C. Teichert<sup>2</sup>, F.A.E. de Voogd<sup>2</sup>, B.G.P. Koot<sup>1</sup>, K.B. Gecse<sup>2</sup>, <sup>1</sup>Dept. of Pediatric Gastroenterology Hepatology and Nutrition, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, Nederland*

**Background:** Selecting the right treatment in the early stages of inflammatory bowel disease (IBD) is essential for preventing disease progression and modifying disease course. Intestinal ultrasound (IUS) is a promising tool in predicting early treatment response. We aimed to systematically review current literature on the predictive value of IUS for treatment response.

**Methods:** A literature search was performed on the 24<sup>th</sup> of October and updated on the 26<sup>th</sup> of March 2024 using PubMed, Medline, Embase, Cochrane Library and Cinahl. We included articles in paediatric and adult IBD patients where IUS was used for the assessment of treatment. Studies were grouped based on timing of IUS after start of treatment. In acute severe ulcerative colitis (ASUC) timing included within 5 days or between 6-14 days. In ulcerative colitis (UC) or Crohn's disease (CD) baseline, 0-3 weeks, 4-8 weeks, 12-16 weeks and >16 weeks were used. Additional response assessments included clinical or endoscopic disease activity scores and adverse events (e.g. surgery, hospitalization, treatment escalation).

**Results:** Out of 1739 unique articles, 27 were included with 17 in CD, 6 in UC and 4 in ASUC. Baseline IUS parameters were not predictive of treatment response in CD, UC or ASUC. In CD, most studies investigated response to anti-TNF (n=12), though multiple therapies were evaluated (n=5). For anti-TNF, IUS was predictive of response to therapy at all time points from 2 weeks onward. IUS at week 4 to 8 showed conflicting results in studies using multiple treatments. After 12 weeks, IUS predicted clinical and endoscopic outcomes as well as adverse events in all studies regardless of treatment. Lastly, an IUS several months after starting treatment predicted clinical response, adverse events and endoscopic response in the follow years. A variety of medical treatments were included in most UC studies (n=3). IUS within 3 weeks of treatment initiation was able to predict both short- and long-term clinical response in UC. Endoscopic response could be predicted by IUS after 6 weeks. The combination of BWT and colour Doppler signal (CDS) measured at 3 and 9 months of therapy predicted endoscopic activity after 9 and 15 months, respectively. In ASUC, bowel wall thickness (BWT) significantly differed between responders and non-responders of intravenous steroid treatment when measured 1-3 days after treatment initiation.

**Conclusion:** IUS performed at 1-3 days, 2 weeks and 6 weeks was predictive of treatment response in ASUC, CD and UC, respectively. Further data is needed to characterize IUS response kinetics of the individual therapies.

## Quantification of fluorescence angiography for visceral perfusion assessment: measuring agreement between two software algorithms

D.J. Nijssen<sup>1,2</sup>, J.J. Joosten<sup>1,2</sup>, J. Osterkamp<sup>3</sup>, R.M. van den Elzen<sup>4,5</sup>, D.M. de Bruin<sup>4,5</sup>, M.B.S. Svendsen<sup>6</sup>, M.W. Dalsgaard<sup>6</sup>, S.S. Gisbertz<sup>1</sup>, R. Hompes<sup>1,2</sup>, M.P. Achiam<sup>3</sup>, M.I. van Berge Henegouwen<sup>1,2</sup>, <sup>1</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Surgery, Cancer Center, Amsterdam, <sup>3</sup>Dept. of Surgery, Rigshospitalet, Copenhagen, Denmark, <sup>4</sup>Dept. of Biomedical Data Sciences, Amsterdam UMC, Amsterdam, <sup>5</sup>Dept. of Biomedical Data Sciences, Cancer Center, Amsterdam, <sup>6</sup>Dept. of Biomedical Data Sciences, Rigshospitalet, Copenhagen, Denmark

**Background:** Indocyanine green fluorescence angiography (ICG-FA) may reduce perfusion-related complications of gastrointestinal anastomosis. Software implementations for quantifying ICG-FA are emerging to overcome a subjective interpretation of the technology. Comparison between quantification algorithms is needed to judge its external validity. This study aimed to measure the agreement for visceral perfusion assessment between two independently developed quantification software implementations.

**Methods:** This retrospective cohort analysis included standardized ICG-FA video recordings of patients who underwent esophagectomy with gastric conduit reconstruction between August 2020 until February 2022. Recordings were analyzed by two quantification software implementations: AMS and CPH. The quantitative parameter used to measure visceral perfusion was the *normalized maximum slope* derived from fluorescence time curves. The agreement between AMS and CPH was evaluated in a Bland–Altman analysis. The relation between the intraoperative measurement of perfusion and the incidence of anastomotic leakage was determined for both software implementations.

**Results:** Seventy pre-anastomosis ICG-FA recordings were included in the study. The Bland–Altman analysis indicated a mean relative difference of + 58.2% in the measurement of the *normalized maximum slope* when comparing the AMS software to CPH. The agreement between AMS and CPH deteriorated as the magnitude of the measured values increased, revealing a proportional (linear) bias ( $R^2 = 0.512$ ,  $p < 0.001$ ). Neither the AMS nor the CPH measurements of the *normalized maximum slope* held a significant relationship with the occurrence of anastomotic leakage (median of 0.081 versus 0.074,  $p = 0.32$  and  $0.041$  vs  $0.042$ ,  $p = 0.51$ , respectively).

**Conclusion:** This is the first study to demonstrate technical differences in software implementations that can lead to discrepancies in ICG-FA quantification in human clinical cases. The possible variation among software-based quantification methods should be considered when interpreting studies that report quantitative ICG-FA parameters and derived thresholds, as there may be a limited external validity.

## The population with Primary Biliary Cholangitis is changing over time: milder disease and more metabolic comorbidities

M.C. Van Hooff<sup>1</sup>, R.C. De Veer<sup>1</sup>, E. Werner<sup>1</sup>, U. Beuers<sup>2</sup>, J.P.H. Drenth<sup>2</sup>, F.J.C. Cuperus<sup>3</sup>, B. van Hoek<sup>4</sup>, B.J. Veldt<sup>5</sup>, M. Klemm-Kropp<sup>6</sup>, S. van Meer<sup>7</sup>, R.C. Verdonk<sup>8</sup>, H.J. Flink<sup>9</sup>, J.M. Vrolijk<sup>10</sup>, T.J.G. Gevers<sup>11</sup>, C.Y. Ponsioen<sup>2</sup>, R. Roomer<sup>12</sup>, P.C.J. Ter Borg<sup>13</sup>, L. Oterdoom<sup>14</sup>, M.A.M.C. Baven-Pronk<sup>15</sup>, A. Vrieze<sup>16</sup>, I.C.A.W. Konings<sup>17</sup>, J. Schmidt-Bohmer<sup>18</sup>, F.C. Bekkering<sup>19</sup>, S.H.C. van Stiphout<sup>20</sup>, N.F.M. van Gerven<sup>21</sup>, S.J. van den Hazel<sup>22</sup>, P.J. Bus<sup>23</sup>, A. Van der Beek<sup>24</sup>, S. Vandebosch<sup>25</sup>, M.J. Denters<sup>26</sup>, H.L.A. Janssen<sup>1, 27</sup>, N.S. Erler<sup>28</sup>, B.E. Hansen<sup>28</sup>, A.J. van der Meer<sup>1</sup> <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>3</sup>Dept. of Gastroenterology and Hepatology, UMC Groningen, Groningen, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Reinier de Graaf Gasthuis, Delft, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Noordwest Ziekenhuisgroep, Alkmaar, <sup>7</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>8</sup>Dept. of Gastroenterology and Hepatology, St. Antonius Ziekenhuis, Nieuwegein, <sup>9</sup>Dept. of Gastroenterology and Hepatology, Catharina Ziekenhuis, Eindhoven, <sup>10</sup>Dept. of Gastroenterology and Hepatology, Rijnstate Ziekenhuis, Arnhem, <sup>11</sup>Dept. of Gastroenterology and Hepatology, MUMC+, Maastricht, <sup>12</sup>Dept. of Gastroenterology and Hepatology, St. Franciscus Gasthuis & Vlietland, Rotterdam, <sup>13</sup>Dept. of Gastroenterology and Hepatology, IkaZia Ziekenhuis, Rotterdam, <sup>14</sup>Dept. of Gastroenterology and Hepatology, Hagaziekenhuis, Den Haag, <sup>15</sup>Dept. of Gastroenterology and Hepatology, Groene Hart Ziekenhuis, Gouda, <sup>16</sup>Dept. of Gastroenterology and Hepatology, Flevoziekenhuis, Almere, <sup>17</sup>Dept. of Gastroenterology and Hepatology, Admiraal de Ruyter Ziekenhuis, Goes, <sup>18</sup>Dept. of Gastroenterology and Hepatology, Dijklander Ziekenhuis, Hoorn, <sup>19</sup>Dept. of Gastroenterology and Hepatology, IJsselland Ziekenhuis, Capelle aan den IJssel, <sup>20</sup>Dept. of Gastroenterology and Hepatology, Elkerliek Ziekenhuis, Helmond, <sup>21</sup>Dept. of Gastroenterology and Hepatology, Rode Kruis Ziekenhuis, Beverwijk, <sup>22</sup>Dept. of Gastroenterology and Hepatology, Slingeland Ziekenhuis, Doetinchem, <sup>23</sup>Dept. of Gastroenterology and Hepatology, Laurentius Ziekenhuis, Roermond, <sup>24</sup>Dept. of Gastroenterology and Hepatology, Ziekenhuis Rivierenland, Tiel, <sup>25</sup>Dept. of Gastroenterology and Hepatology, ZorgSaam Ziekenhuis, Terneuzen, <sup>26</sup>Dept. of Gastroenterology and Hepatology, Zaans Medisch Centrum, Zaandam, <sup>27</sup>Dept. of Gastroenterology and Hepatology, Toronto Centre for Liver Disease, Toronto, Canada, <sup>28</sup>Dept. of Epidemiology and Biostatistics, Erasmus MC, Rotterdam, Nederland

**Background:** Our understanding of primary biliary cholangitis (PBC) primarily relies on older cohort studies from tertiary centers. However, enhanced diagnosis rates and changing health behavior may impact the patient population. We aimed to assess changes in presenting characteristics of patients with PBC over the last 30 years.

**Methods:** Every identifiable patient with an established diagnosis of PBC from all 71 hospitals in the Netherlands was retrospectively included in this nationwide study. Case identification was based on diagnosis and treatment codes, antimitochondrial antibodies (AMA) results, and locally available registers. Data on presenting characteristics were extracted through medical chart review. Patients were stratified into 3 decades (1990-1999, 2000-2009, and 2010-2019) according to date of diagnosis. Differences were assessed by complete case analysis per baseline characteristic. Laboratory values are presented in upper limits of normal.

**Results:** From 1990 up to and including 2019, 3882 patients were diagnosed (3419 [88.1%] females). Stratified according to diagnosis year, 532 (13.7%) were diagnosed in 1990-1999, 1310 (33.7%) in 2000-2009, and 2040 (52.6%) in 2010-2019. Mean age at diagnosis increased over the 3 decades; 53.4 (SD 10.9), 56.6 (SD 12.6), and 59.1 (SD 12.7) years, respectively ( $p < 0.001$ ). In the last decade 907/1410 (64.3%) patients were diagnosed at an early biochemical stage (normal bilirubin and albumin) as opposed to 142/236 (60.2%) in 1990-1999 and 433/758 (57.1%) in 2000-2009 ( $p = 0.004$ ). The median levels of ALP (2.31 [IQR 1.56-3.92] in 1990-1999, 1.84 [1.29-3.09] in 2000-2009, and 1.87 [1.25-3.05] in 2010-2019,  $p < 0.001$ ) and bilirubin (0.60 [IQR 0.47-1.00], 0.59 [0.42-0.94], and 0.48 [0.35-0.76], respectively,  $p < 0.001$ ) were lower in recent decades. In contrast, the median gGT level was stable (6.25 [IQR 4.09-10.4], 6.26 [3.67-10.83], and 6.36 [3.49-11.3], respectively,  $p = 0.925$ ). The median BMI showed a modest but statistically significant increase (24.8 [IQR 22.0-28.2], 25.6 [22.9-29.0], and 25.9 [23.0-29.4],  $p = 0.009$ ). In addition, the proportion with diabetes mellitus (34 [6.4%], 110 [8.4%], and

253 [12.4%,  $p < 0.001$ ) and arterial hypertension (68 [12.8%], 229 [17.5%], and 407 [19.5%],  $p < 0.001$ ) at diagnosis increased over time.

Conclusion: Although the average age at diagnosis has increased over the last 30 years, patients with PBC are nowadays more frequently diagnosed at a milder stage of disease. While median ALP and bilirubin levels at diagnosis declined over time, the level of gGT remained stable. This may be related to the increase of comorbidities associated with the metabolic syndrome.

## Clinical course of acute kidney injury in cirrhotic patients: implications for prognosis and therapeutic approaches

S.E. Fischer<sup>1</sup>, M. Fiocco<sup>2,3,4</sup>, J.R.A. Balak<sup>5</sup>, J. Nieuwenhuizen<sup>6</sup>, M.J. Coenraad<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Leids Universitair Medisch Centrum, Leiden, <sup>2</sup>Dept. of Biomedical Data Sciences, Department of Biomedical Data Science, Leiden University, Leiden, <sup>3</sup>Dept. of Biomedical Data Sciences, Mathematical Institute Leiden, Leiden University, Leiden, <sup>4</sup>Dept. of Biomedical Data Sciences, Princess Maxima Center for Pediatric Oncology, Utrecht, <sup>5</sup>Dept. of Internal Medicine, Leids Universitair Medisch Centrum, Leiden, <sup>6</sup>Intensive Care, Leids Universitair Medisch Centrum, Leiden, Nederland

**Background:** Acute Kidney Injury (AKI), is frequently encountered among cirrhotic patients and is associated with a poor prognosis. The presence and development of acute-on-chronic liver failure (ACLF), especially of extrarenal organ failures is unknown in cirrhotic patients with AKI. This study investigates ACLF patterns in cirrhotic patients with AKI, aiming to provide insights into this complex clinical course and to identify leads for modifying the disease trajectory.

**Methods:** A retrospective cohort study was performed in consecutive hospitalized cirrhotic patients with AKI at a tertiary center. Data on disease trajectory, renal outcomes, ACLF development/progression (EASL-CLIF-C criteria) and survival data were collected. Logistic regression analysis was used to investigate the association between AKI and ACLF on transplant-free survival and to identify risk factors for specific types of organ failure in ACLF.

**Results:** 248 patients (77% male) were included. Mean age was 61 years [IQR° 54-67] and median MELD score 21 [17-28]. 189 patients (76%) were diagnosed with AKI upon admission. Etiology of AKI was 36% pre-renal, 44% Hepatorenal Syndrome-AKI and 20% other/mixed. 212 patients (85%) received albumin and 151 (61%) received terlipressin, with a 30% response rate upon discharge. Progression of AKI or no response to therapy was reported in 51% during hospitalization.

ACLF was present at admission in 97 patients (39%), characterized by predominant renal (69%) and liver (46%) failure. Among these patients, 59 (61%) showed progression of ACLF during hospitalization, with predominant renal and liver failure (83% and 70% respectively). 76 out of 151 patients without ACLF at admission (50%) developed ACLF within 90 days, with renal and respiratory failure as primary organ failures (64% and 62% respectively). Altogether, ACLF was diagnosed in 173 patients (70%) within 90 days of follow-up

Patients with ACLF development were at increased risk of developing circulatory failure if no response of AKI was observed (OR 3.57, CI 1.14-11.14). Patients with progression of ACLF who showed no response/progression of AKI were more likely to develop respiratory failure (OR 4.12, CI 1.17-14.50). 142 (57%) patients died within 90 days after AKI development. One-year transplant-free survival was 22%.

**Conclusion:** Cirrhotic patients with AKI are at very high risk of short-term ACLF development and mortality. Respiratory failure is, after renal failure, the second most common organ failure in patients who develop ACLF after AKI diagnosis. Lack of response to treatment for AKI is a risk factor for the development of new respiratory and circulatory failure in patients who show progression of ACLF.