

POCKET GUIDE

www.ecio.org

The ECIO 2019 event in the CIRSE society app

Your toolkit for ECIO 2019 in Amsterdam:

- browse the programme
- build your personal schedule
- · complete the session evaluation
- participate in e-voting polls
- · send questions to the moderators
- find your way around using the interactive floor plan
- · browse the list of exhibitors
- · watch sessions live and on demand
- · and much more...



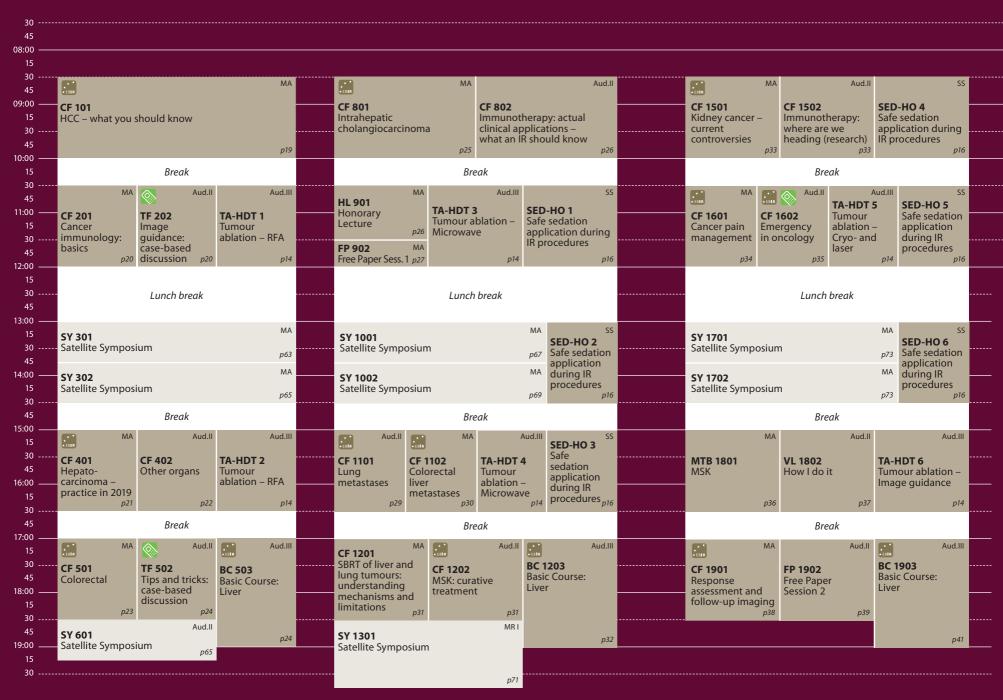




Available for iOS and Android

Radiological Society of Europe





Wednesday, April 11

Aud.II CF 2101 New indications: localised prostate cancer	CF 2102 Quality issues, research and patterns of practice in interventional oncology	30 45 08:00 15 30 45 09:00 15 30 45
Bre	eak	—— 10:00 15 30
MM 2201 Morbidity & Mortality Co	nference	45 —— 11:00 —— 30 —— 30 —— 12:00

CF: Clinical Focus Session **TF:** Technical Focus Session

MTB: Multidisciplinary Tumour Board

VL: Video Learning Session **HL:** Honorary Lecture

HDT: Hands-on Device Training **SED:** Safe Sedation Training

BC: Basic Course **FP:** Free Paper Session

MM: Morbidity and Mortality

MA: Main Auditorium **Aud. II:** Auditorium II

Aud. III: Auditorium III (G 103) **MR. I:** Meeting Room I (G 110) **SS:** Safe Sedation (G 107)



e-voting

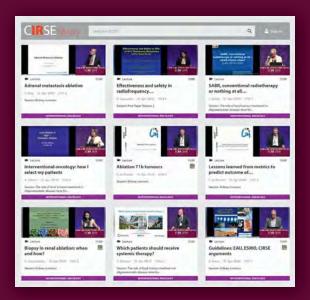


Sessions include lectures that are recommended for EBIR preparation

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ECIO 2019

LIVE AND ON DEMAND



live.ecio.org

Can't make it to the congress?

You can watch all sessions in HD quality via our live stream!

Can't decide which session to go to?

Pick one and watch the other lectures on demand in the CIRSE Library!

Interested in more interventional content?

The CIRSE Library is the largest online presentation database for interventional radiology, featuring slides and webcasts from past CIRSE meetings. CIRSE members have year-round free access to all live congresses and webcast recordings. Find out more about our various access options for non-members at cirse.org/library/access.

4	4 Important Addresses, 5 Committees, 6 General Information, 12 Honorary Lecture, 14 Hands-on Device Training, 16 Safe Sedation Training	
19	Monday – Scientific Programme	MOM
25	Tuesday – Scientific Programme	TUE
33	Wednesday – Scientific Programme	WED
42	Thursday – Scientific Programme	THU
45	Posters	POSTERS
61	Corporate Activities 63 Satellite Symposia 75 Learning Centres 79 Hands-on Training Sponsors	
80	Exhibitors and Sponsors 80 Sponsors 82 Technical Exhibition, Alphabetical List 83 Technical Exhibition, Numerical List 84 Technical Exhibitors Guide	

Important Addresses

Congress Venue RAI Convention Centre Europaplein 2-22 1078 GZ Amsterdam Netherlands

Organising Secretariat CIRSE Central Office

Neutorgasse 9 1010 Vienna Austria

Phone: +43 1 904 2003 Fax: +43 1 904 2003 30 Email: info@cirse.org www.ecio.org

The European Conference on Interventional Oncology is organised by CIRSE (Cardiovascular and Interventional Radiological Society of Europe).

The official congress website is: www.ecio.org

To contact the CIRSE Central Office or members of the committee, please write to *info@cirse.org*.



Committees 5

Committees

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General Information from A to Z

App

Let the CIRSE app take care of your congress planning. Newcomers, please download the CIRSE society app which is available for iPhone, iPad and Android and install the ECIO 2019 event. If the CIRSE society app is already on your smartphone, just install the ECIO 2019 event and have the best toolkit to:



- build your personal schedule
- complete the session evaluation
- search for exhibitors by product category
- take part in voting
- submit questions to the moderators in select sessions

Badges

Your personalised badge is your admission card to the congress. For organisational and security reasons, badges must be worn at the congress venue at all times. A lanyard will be given to you with the congress bag. Identity checks in the congress centre may occur at any time. In case the badge is lost, a replacement badge will be provided for an administrative charge of €80.

Certificate of Attendance

To obtain your certificate of attendance, you can choose one of the following options:

Print your certificate onsite at the congress

From 10:00 on Wednesday, April 10, you can use one of the dedicated workstations in the registration area to print your certificate. All you need is your congress badge.

Print your certificate at home

After the congress you will be able to print your certificate of attendance at www.ecio.org. All you will need is your last name and badge number. Alternatively, you could log into your personal CIRSE account at www.cirse.org with your personal log-in details.

CME Credit Allowance

ECIO 2019 has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) with 21 European CME credits (ECMEC®s). Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity.

Through an agreement between the Union Européenne des Médecins Spécialistes and the American Medical Association, physicians may convert EACCME® credits to an equivalent number of AMA PRA Category 1 Credits™. Information on the process to convert EACCME® credit to AMA credit can be found at www.ama-assn.org/education/earn-credit-participation-international-activities.

Live educational activities, occurring outside of Canada, recognised by the UEMS-EACCME® for ECMEC®s are deemed to be Accredited Group Learning Activities (Section 1) as defined by the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada.

Coffee Breaks, Snacks & Meals

During the breaks refreshments can be purchased at the café bars located either side of the Exhibition hall.

A complimentary lunch buffet provided by our Diamond sponsors will be available in the exhibition area. Lunch will be from 12:00-13:00, with an additional complimentary coffee and refreshments break from 14:30-15:00.

Disclaimer

CIRSE cannot accept any liability for the acts of the meeting suppliers or the attendees' safety while travelling to or from the congress. All participants are strongly advised to carry adequate travel and health insurance, as CIRSE cannot accept liability for accidents or injuries that may occur.

Disclosures

For financial disclosures and conflict-of-interest statements, please refer to www.ecio.org.

Evaluation

To complete the session evaluation and obtain credits for your attendance at ECIO 2019 sessions, please use the online evaluation system, accessible through the CIRSE mobile app (please see page 6) and at http://programme.ecio.org/



Internet

Free wireless service is available to all delegates throughout the congress centre.

Network: ECIO2019 Password: ecio2019

Live and On Demand - live.ecio.org

All sessions are being livestreamed and will be available directly on demand in the CIRSE Library. Never miss another session! CIRSE members have year-round free access to all live congresses and webcast recordings. Find out more about our various access options for non-members at cirse.org/library/access.

The CIRSE Library is the largest online presentation database for interventional radiology, featuring slides and webcasts from past CIRSE meetings. With monthly compiled topic packages, the CIRSE Library is the ideal tool for your research and educational needs. Presentations recorded at ECIO 2019 will be available immediately.

Mobile Phones

Please do not forget to turn your mobile phone to silent mode during the sessions.



Photographs and Video Recording

Please note that any form of recording, filming or photographing of presentation material during the sessions is strictly forbidden. Subject to the authors' consent, all presentation material will be made available online in the CIRSE Library – library.cirse.org.

Poster Area

All accepted scientific and educational posters will be presented electronically through ECIO's Electronic Poster Online System. For a detailed list of all posters, please refer to pages 45-60. The Poster Area is located on the first floor (please see the floorplan on the inside back cover).

Opening Hours

Monday, April 8	07:30-18:30
Tuesday, April 9	07:30-18:30
Wednesday, April 10	07:30-18:30
Thursday, April 11	07:30-18:30

Publication in CVIR

Meeting abstracts are published in CIRSE's official journal, CVIR, as an electronic supplementary issue, and are therefore citable publications.

Online Publication Number: 10.1007/s00270-019-02165-1

We encourage submission of the complete manuscript of oral or poster presentations for consideration to CVIR. Please submit your manuscript through the CVIR submission website on www.editorialmanager.com/cvir. Please note that all submissions have to comply with the "CVIR Instructions for Authors" specified on the CVIR submission website.

Registration Desk - Opening Hours

Sunday, April 7	16:00-18:00
Monday, April 8	07:30-18:00
Tuesday, April 9	08:00-18:00
Wednesday, April 10	08:00-18:00
Thursday, April 11	08:00-12:00

Smoking

The ECIO Annual Meeting is a non-smoking congress. Smoking is only permitted outside the congress centre.

Speaker Centre

The Speaker Centre is located on the first floor. All material must be in English and provided on a CD-ROM, DVD-ROM or USB flash drive (which is preferred) to be placed on the central server onsite. All presentation files must be uploaded at least three hours prior to the beginning of the corresponding session.

Computers connected to the local server allowing access to the speakers' presentations are available in every lecture room. These computers are equipped with Microsoft Windows 10 Professional and Microsoft Office 2016 Professional. Please note that speakers are not allowed to use their own laptops for their presentations.

Opening Hours

Sunday, April 7	16:00-18:00
Monday, April 8	07:45-18:00
Tuesday, April 9	07:45-18:00
Wednesday, April 10	08:00-18:00
Thursday, April 11	08:00-12:00

Technical Exhibition

Please find a floor plan of the exhibition on the inside of the back cover and a detailed list of all exhibitors and sponsors on pages 80-120.

Opening Hours

Monday, April 8	09:30-17:30
Tuesday, April 9	09:30-17:30
Wednesday, April 10	09:30-17:30
Thursday, April 11	09:30-12:30

Tourist Information and Hospitality Desk

For information regarding restaurants and excursions, please refer to the desk of our official travel partner Kuoni Congress located at registration. Our colleagues from Kuoni Congress will be pleased to help you with all matters related to your stay in Amsterdam.



CIRSE academy

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- Lung metastases
- Metastatic bone disease
- Primary lung cancer
- Renal cancer

CME

Anytime, anywhere – your foundations of interventional oncology

Leaders in Oncologic Interventions

Ricardo García-Mónaco Honorary Lecturer



Ricardo García-Mónaco completed his medical degree with honours at the University of Buenos Aires in 1981, before successfully sitting the boards of Radiology and Imaging Diagnosis of Argentina's National Ministry of Health in 1988. A fluent speaker of Spanish, English and French, he acquired a Diplome de Résonance Magnétique from the University of Paris in 1990, before returning to Argentina and taking up a double post as Associate Professor of Radiology and Programme Director of Interventional and Vascular Radiology at the University of Buenos Aires in 1996.

Prof. García-Mónaco completed his Doctorate (PhD) in medicine in 2004, and became a full Professor of Radiology at the University of Buenos Aires in 2007, the same year he became Director of the university's radiology medical school programme, a position he still holds.

His extensive post-graduate training took him to many corners of the earth: following his initial residencies at the Hospital Italiano in Buenos Aires, he completed training in Angiography and Interventional Radiology at Bicêtre Hospital, University of Paris from 1988-1992, and Visiting Fellowships at both New York University, USA and Toronto Western Hospital, Canada in 1990.

Returning then to France, he worked as Médecin Assistant a Titre Etranger at Hôpital Bicêtre and as a Consultant IR at the renowned Institut Gustav Roussy in Villejuif. Since 1992, Prof. García-Mónaco has been Head of Endovascular Therapy and Interventional Radiology at Hospital Italiano, and since 2005, also holds the post of Chairman of the hospital's Department of Radiology.

His international medical career is complemented by his active membership of many medical associations, including the Radiological Society of Argentina (SAR), the World Federation of Therapeutic and Interventional Neuroradiology, CIRSE, RSNA, the Société Francaise de Radiologie (SFR), ESR, the International Society for the Study of Vascular Anomalies (ISSVA), the Society

of Hepato-Gastroenterology and the International Society for Strategic Studies in Radiology (ISSSR). He is an SIR Fellow, and is also a Founding Member of the Argentine College of Vascular and Interventional Radiology (CARVI), which he currently serves as President. Prof. García-Mónaco is also the current president of the International Society of Radiology, and has previously served as President of Sociedad Argentina de Radiologia and the Interamerican College of Radiology.

Prof. García-Mónaco is a prolific researcher and educator, having delivered 477 scientific or educational presentations at national or international congresses, and having 227 scientific papers published in national or international journals. He is also author or co-author of over 70 books or book chapters. He is a peer-reviewer for acclaimed journals such as CVIR, Radiology, JVIR, Thrombosis and Radiographics, and serves on the Editorial Committees of Interventional Oncology 360, Digestive Disease Interventions and Revista de la Sociedad Iberoamericana de Intervencionismo, amongst others.

Prof. García-Mónaco has received awards for 39 scientific presentations (24 national and 15 international), and has been conferred honorary membership of ESR, RSNA, the Société Française de Radiologie and the Societa Italiana de Radiologia Medica (SIRM), amongst others. He has received the Gold Medal of the Argentine Society of Radiology (SAR), and has served on many advisory boards and educational committees, including his current posts as a Member of the ISSSR Membership Committee, Member of RSNA Vascular/Interventional Education Exhibits Subcommittee and Chairman of the IT Education Committee of ISR.

Honorary Lecture

Interventional Oncology: from Europe to South America

Tuesday, April 9, 10:30-11:30, Main Auditorium

Hands-on Device Training

Tumour ablation

Percutaneous ablation plays an increasingly fundamental role in the loco-regional treatment of cancer. Ablation technologies and equipment for live image guidance are developing quickly.

This Hands-on Device Training (HDT) aims to provide an overview of available technologies. Separate sessions will look at radiofrequency ablation, microwave ablation, cryoablation and laser ablation, as well as image guidance.

After a short kick-off presentation by the HDT coordinators, participants will have the opportunity to learn about the specifics, as well as the safe and effective use of the available technology in a hands-on setting.

Each HDT will feature a round-table discussion with the coordinators at the end of each session allowing participants to ask questions and give feedback.

Monday, April 8

TA-HDT 1 – Radiofrequency 10:30-12:00 **TA-HDT 2 – Radiofrequency** 15:00-16:30

Coordinators: J.M. Abadal (Madrid/ES), F. Orsi (Milan/IT)

Tuesday, April 9

TA-HDT 3 – Microwave 10:30-12:00 **TA-HDT 4 – Microwave** 15:00-16:30

Coordinators: S. Ilyas (London/UK), P. Rao (Strasbourg/FR)

Wednesday, April 10

TA-HDT 5 – Cryoablation 10:30-12:00

and laser ablation

Coordinators:

F.M. Gómez (Barcelona/ES), A.H. Mahnken (Marburg/DE)

TA-HDT 6 – Image guidance 15:00-16:30

Coordinators:

A. Hakimé (Villejuif/FR), L. Solbiati (Rozzano/IT)

Location

Auditorium III (G 103)

Please note that participation is free of charge, but places are limited to 25 people per session and will be allocated on a first come, first served basis.

As HDT sessions offer practical medical training, participation is for qualified medical professionals only.

For an overview of the industry partners supporting the Hands-on Device Training sessions, please refer to page 79.

Hands-on Training

Safe sedation application during IR procedures

This practical workshop will give participants the opportunity to perform procedural sedation in a simulated environment and inform them on the most common respiratory problems during procedural sedation, as well as which instruments are available to make these interventions safer.

The simulation set-up consists of a full-scale patient simulator with capnography, BIS monitoring and TIVA/TCI pumps. Participants will perform these therapies under the supervision of AQAI's experienced trainers.

Learning objectives:

- To apply procedural sedation using different approaches.
- To identify complications and challenges during procedural sedation.
- To judge on the value of various monitoring technologies.
- To recognise the additional value of capnography during sedation.

Tuesday, April 9

SED-HO 1	10:30-12:00
SED-HO 2	13:00-14:30
SED-HO 3	15:00-16:30

Wednesday, April 10

SED-HO 4	08:30-10:00
SED-HO 5	10:30-12:00
SED-HO 6	13:00-14:30

Coordinators:

M. Heinrichs (Mainz/DE), W. Heinrichs (Mainz/DE)

Location

Safe Sedation (G 107)

Please note that participation is free of charge, but places are limited to 25 people per session and will be allocated on a first come, first served basis.

As HDT sessions offer practical medical training, participation is for qualified medical professionals only.

For an overview of the industry partners supporting the Hands-on Training sessions, please refer to page 79.



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Upcoming examinations:

- February ECR 2020
- September CIRSE 2020

Take part and submit your application online at www.cirse.org/ebir







Cardiovascular and Interventional Radiological Society of Europe

Monday, April 8

08:30-10:00, Main Auditorium Clinical Focus Session CF 101 HCC - what you should know

> Moderators: H.-J. Klümpen (Amsterdam/NL), M. Ronot (Clichy/FR)

- 101.1 HCC guidelines what is new? M. Varela (Oviedo/ES)
- 101.2 Percutaneous ablation: best indication and which energy A. Hocquelet (Lausanne/CH)
- 101.3 Radioembolisation: who is a good candidate after the new classification J. Ricke (Munich/DE)
 - 101.4 Lessons learned from "Development of a prognostic score for recommended TACE candidates with hepatocellular carcinoma: a multicentre observational study" M. Ronot (Clichy/FR)
 - 101.5 Intermediate stage: what are the indications for combined IO therapies? R. Lencioni (Pisa/IT)
- 101.6 HCC and immunotherapy H.-J. Klümpen (Amsterdam/NL)



10:30-12:00, Main Auditorium Clinical Focus Session CF 201 Cancer immunology: basics

Moderators: G.J. Adema (Nijmegen/NL), M. Ahmed (Boston, MA/US)

- 201.1 Immune alterations in solid tumours *W.H. Fridman (Paris/FR)*
- 201.2 Immune checkpoint inhibitors how do they work?
 A. Digklia (Lausanne/CH)
- 201.3 Immune response: the role of the tumour *G. Malouf (Strasbourg/FR)*
- 201.4 Immune response: the role of the microenvironment

 C. Ottensmeier (Southampton/UK)
- 201.5 Mechanisms of priming immune response using local treatment

 M. Ahmed (Boston, MA/US)

10:30-12:00, Auditorium II

Clinical Focus Session TF 202 Image guidance: case-based discussion

Moderators: P. Haage (Wuppertal/DE), P.L. Pereira (Heilbronn/DE)

- 202.1 Ultrasound fusion guidance *L. Solbiati (Rozzano/IT)*
- 202.2 I have a CBCT and I do all the procedures *M.J.L. van Strijen (Nieuwegein/NL)*
- 202.3 I have an angio plus CT and I do all the procedures *F.G. Irani (Singapore/SG)*
- 202.4 MR-guided interventions: where are we? R.L. Cazzato (Strasbourg/FR)
- 202.5 Robotic and stereotaxic assistance in IO B.J. Wood (Bethesda, MD/US)
- 202.6 Augmented reality
 A. Gangi (Strasbourg/FR)



10:30-12:00, Auditorium III (G 103) Hands-on Device Training TA-HDT 1 Tumour ablation - Radiofrequency

> Coordinators: J.M. Abadal (Madrid/ES), F. Orsi (Milan/IT)

13:00-13:45, Main Auditorium SY 301 Satellite Symposium

For the programme, please refer to page 63.

13:45-14:30, Main Auditorium

SY 302 Satellite Symposium

For the programme, please refer to page 65.

15:00-16:30, Main Auditorium

Clinical Focus Session

CF 401 Hepatocarcinoma – practice in 2019

Moderators: J.-F. Geschwind (Westport, CT/US), R. Lencioni (Pisa/IT)

- 401.1 Imaging of HCC: from EASL 2018 to LI-RADS M. Ronot (Clichy/FR)
 - 401.2 TACE: new concepts B. Guiu (Montpellier/FR)
 - 401.3 Is ablation only for non-surgical candidates? L. Crocetti (Pisa/IT)
 - 401.4 Determinants of survival after TACE in patients with HCC J.-F. Geschwind (Westport, CT/US)
 - 401.5 Ablation: how to select patients with best outcomes
 - A. Denys (Lausanne/CH) 401.6 Radioembolisation: is dosimetry the key?
 - M.G.E.H. Lam (Utrecht/NL)



15:00-16:30, Auditorium II Clinical Focus Session CF 402 Other organs

Moderators: T.K. Helmberger (Munich/DE), T. Sabharwal (London/UK)

402.1 Thyroid

R. Cervelli (Pisa/IT)

402.2 Pancreas

G. Narayanan (Miami, FL/US)

402.3 Adrenal

J. Garnon (Strasbourg/FR)

402.4 Lymph nodes

G. Tsoumakidou (Lausanne/CH)

402.5 Breast

J. Palussière (Bordeaux/FR)

15:00-16:30, Auditorium III (G 103)

Hands-on Device Training

TA-HDT 2 Tumour ablation – Radiofrequency

Coordinators: J.M. Abadal (Madrid/ES), F. Orsi (Milan/IT)

17:00-18:30, Main Auditorium **Clinical Focus Session** CF 501 Colorectal

Moderators: J.I. Bilbao (Pamplona/ES), O.M. van Delden (Amsterdam/NL)

- 501.1 Prognostic factors in metastatic cancer (not TNM) J.-E. Kurtz (Strasbourg/FR)
- 501.2 Treatment strategies according to the ESMO quidelines D. Arnold (Hamburg/DE)
 - 501.3 Immunotherapy in metastatic colorectal cancer: when and how M. Fuchs (Munich/DE)
 - 501.4 Summary of "Ablation of colorectal liver metastases: interaction of ablation margins and RAS mutation profiling on local tumour progression-free survival" O.M. van Delden (Amsterdam/NL)
- 🔛 501.5 Local treatment in oligometastatic disease M. Meijerink (Amsterdam/NL)
- 501.6 Intra-arterial therapies in liver-dominant disease P.L. Pereira (Heilbronn/DE)

17:00-18:30, Auditorium II Technical Focus Session

TF 502 Tips and tricks: case-based discussion

Moderators: F. Fanelli (Florence/IT), M. Sone (Tokyo/JP)

- 502.1 Painful bone metastases: HIFU or no HIFU? A. Napoli (Rome/IT)
- 502.2 Central lung tumours: how to manage? A. Veltri (Orbassano/IT)
- 502.3 How to treat sub-pleural lung disease? F. Deschamps (Villejuif/FR)
- 502.4 T1b renal cancer: how to achieve complete response?
 - D.J. Breen (Southampton/UK)
- 502.5 Kidney ablation: difficult locations? G.D. Schmit (Rochester, MN/US)

17:00-19:00, Auditorium III (G 103)

Basic Course

BC 503 Fundamentals in liver IO intervention

503.1 Imaging and biopsy of liver tumours: what an IO should know R. Duran (Lausanne/CH)

503.2 Anatomy of liver arteries: tips and tricks for catheterism

J. Bell (Manchester/UK)

503.3 Ablation tools for liver tumours: RFA, cryo and microwave; multipolar and monopolar C. van der Leij (Maastricht/NL)

503.4 Embolisation products: beads, lipiodol and others L. Tselikas (Villejuif/FR)

18:30-19:15, Auditorium II

SY 601 Satellite Symposium

For the programme, please refer to page 65.



Tuesday, April 9

08:30-10:00, Main Auditorium Clinical Focus Session CF 801 Intrahepatic cholangiocarcinoma

> Moderators: P. Chevallier (Nice/FR), U. Pua (Singapore/SG)

🔛 801.1 Peripheral intrahepatic cholangiocarcinoma vs Klatskin tumour: epidemiology, biology and treatment concepts

A. Vogel (Hanover/DE)

801.2 Peripheral intrahepatic cholangiocarcinoma: the role of intra-arterial treatment T.K. Helmberger (Munich/DE)

801.3 Peripheral intrahepatic cholangiocarcinoma in cirrhotic patients: the role of interventional oncology

A. Hocquelet (Lausanne/CH)

801.4 Surgical management of intrahepatic cholangiocarcinoma T.M. van Gulik (Amsterdam/NL)

801.5 How to prepare the liver for surgery

O.M. van Delden (Amsterdam/NL)

Panel discussion

08:30-10:00, Auditorium II
Clinical Focus Session

CF 802 Immunotherapy: actual clinical applications – what an IR should know

Moderators: E. Brountzos (Athens/GR) G. Malouf (Strasbourg/FR),

802.1 Main immunotherapeutic drugs in 2019 – efficacy and side effects

U. Martens (Heilbronn/DE)

802.2 Immunotherapy in renal cell carcinoma – what's new in 2019?

A. Digklia (Lausanne/CH)

802.3 Immunotherapy in lung cancer C. Ottensmeier (Southampton/UK)

802.4 Role of biopsies?

A.D. Bins (Amsterdam/NL)

802.5 Imaging of immune response: state-of-the-art and challenges

C. Dromain (Lausanne/CH)

10:30-11:30, Main Auditorium

HL 901 Honorary Lecture

Moderators: R.A. Morgan (London/UK), O.M. van Delden (Amsterdam/NL)

Laudation: T. de Baère (Villejuif/FR)

901.1 Interventional oncology: from Europe to South America R.D. García-Mónaco (Buenos Aires/AR)

11:30-12:00, Main Auditorium Free Paper Session FP 902 Free Paper Session 1

> Moderators: R.A. Morgan (London/UK), O.M. van Delden (Amsterdam/NL)

- 902.1 Real-time biopsy system for combined optical spectroscopy and electromagnetic tracking in a woodchuck hepatocellular carcinoma model Q.M.B. de Ruiter¹, S. Xu¹, M. Li¹, J. Karanian¹, A. Mikhail¹, M. Mauda Havakuk¹, P. Heidari², A. Sajjadi², W.F. Pritchard¹, U. Mahmood², B.J. Wood¹; ¹Bethesda, MD/US, ²Boston, MA/US
- 902.2 Augmented reality and artificial intelligence-based navigation during percutaneous vertebroplasty: a pilot prospective clinical study P. Auloge¹, R.L. Cazzato¹, N. Ramamurthy², P. De Marini¹, C. Rousseau³, J. Garnon¹, Y.P. Charles¹, J.-P. Steib¹, A. Gangi¹; ¹Strasbourg/FR, ²Norwich/UK, 3Rennes/FR
- 902.3 Percutaneous electrochemotherapy of the pancreas is feasible and safe in a porcine survival model
 - R. Dezman, G. Serša, A. Seliskar, V. Erjavec, P. Popovič, B. Trotovsek, G. Gašljevič, N. Boc, M. Bošnjak, U. Lampreht Tratar, B. Kos, M. Djokic, M. Štabuc, J. Izlakar, N. Milevoj, M. Brložnk, M. Štukelj, B. Krhin, D. Miklavčič, M. Čemažar; Ljubljana/SI

10:30-12:00, Safe Sedation (G 107) Hands-on Training

SED-HO 1 Safe sedation application during IR procedures

Coordinators: M. Heinrichs (Mainz/DE), W. Heinrichs (Mainz/DE)

10:30-12:00, Auditorium III (G 103) Hands-on Device Training TA-HDT 3 Tumour ablation – Microwave

Coordinators: S. Ilyas (London/UK), P.P. Rao (Colmar/FR)

13:00-13:45, Main Auditorium SY 1001 Satellite Symposium

For the programme, please refer to page 67.

13:45-14:30, Main Auditorium SY 1002 Satellite Symposium

For the programme, please refer to page 69.

13:00-14:30, Safe Sedation (G 107)

Hands-on Training

SED-HO 2 Safe sedation application during IR procedures

Coordinators: M. Heinrichs (Mainz/DE), W. Heinrichs (Mainz/DE)

15:00-16:30, Auditorium II **Clinical Focus Session** CF 1101 Lung metastases

Moderators: J.-Y. Gaubert (Marseille/FR), J. Palussière (Bordeaux/FR)

- 1101.1 Rationale for local treatment E.F. Smit (Amsterdam/NL)
 - 1101.2 SBRT: curative or delayed growth S. Heymann (Strasbourg/FR)
 - 1101.3 Surgery: utility and limitations J. Jougon (Pessac/FR)
 - 1101.4 Lessons learned from scientific papers on microwave ablation of lung tumours J. Palussière (Bordeaux/FR)
- 1101.5 Management of oligometastatic patients: non-colorectal J.-Y. Gaubert (Marseille/FR)
- 1101.6 Management of oligometastatic patients: colorectal A. Gillams (London/UK)

15:00-16:30, Main Auditorium Clinical Focus Session CF 1102 Colorectal liver metastases

Moderators: M. Ducreux (Villejuif/FR), T.F. Jakobs (Munich/DE)



1102.1 The oncologist's point of view: the ESMO tool box G. Masi (Pisa/IT)



1102.2 Radioembolisation: landmark clinical trials and patient selection R. Sharma (London/UK)

1102.3 Lessons learned from Dr. Lemdani et al.: Local immunomodulation combined to radiofrequency ablation results in a complete cure of local and distant colorectal carcinoma T.F. Jakobs (Munich/DE)

1102.4 Hepatic arterial infusion chemotherapy (HAIC): patient and drug selection M. Ducreux (Villejuif/FR)



🔝 1102.5 Ablation vs surgery for oligometastatic disease: evidence

C.T. Sofocleous (New York, NY/US)

1102.6 TACE for colorectal mets: updated results J. Golzarian (Minneapolis, MN/US)

15:00-16:30, Safe Sedation (G 107)

Hands-on Training SED-HO 3 Safe sedation application during IR procedures

Coordinators: M. Heinrichs (Mainz/DE), W. Heinrichs (Mainz/DE)

15:00-16:30, Auditorium III (G 103) Hands-on Device Training

TA-HDT 4 Tumour ablation - Microwave

Coordinators: S. Ilyas (London/UK), P.P. Rao (Colmar/FR)



17:00-18:30, Main Auditorium

Clinical Focus Session

CF 1201 SBRT of liver and lung tumours understanding mechanisms and limitations

Moderators: J.-E. Kurtz (Strasbourg/FR), S.B. Solomon (New York, NY/US)

- 1201.1 Radiobiology: sensitive and resistant tumours L.M. Kenny (Brisbane, QLD/AU)
- 1201.2 SBRT for liver and lung tumours: the radiotherapist's perspective M. Hawkins (Oxford/UK)
- 1201.3 Response assessment: liver and lung R.D. Suh (Los Angeles, CA/US)
- 1201.4 SBRT of lung tumours: the limitations S. Hevmann (Strasboura/FR)
- 1201.5 Ablation of lung tumours: the limitations T. de Baère (Villejuif/FR)

Panel discussion

17:00-18:30, Auditorium II Clinical Focus Session CF 1202 MSK: curative treatment

> Moderators: X. Buy (Bordeaux/FR), A. Kelekis (Athens/GR)

- 🔝 1202.1 Essentials of biopsy in MSK tumours A. Feydy (Paris/FR)
 - 1202.2 How to be curative in primary tumours: which IO treatment and where? J.W. Jennings (Saint Louis, MO/US)
- 1202.3 How to avoid complications? M.R. Callstrom (Rochester, MN/US)
- 🔛 1202.4 Role of IO in oligometastatic bone disease D. Filippiadis (Athens/GR)
 - 1202.5 Multimodality treatment for cure in bone tumours R.-T. Hoffmann (Dresden/DE)





17:00-19:00, Auditorium III (G 103)

Basic Course
BC 1203 Ablation and TACE of liver tumours

indications and methods

C. van der Leij (Maastricht/NL)

1203.2 Ablation of metastatic liver tumours: when ablation should replace surgery

L. Tselikas (Villejuif/FR)

1203.3 TACE of HCC: how to make it and how to manage the patient

R. Duran (Lausanne/CH)

1203.4 TACE and ablation complications: how to recognise and manage them

J. Bell (Manchester/UK)

18:30-19:15, Meeting Room I (G 110) **SY 1301 Satellite Symposium**

For a detailed programme, please refer to page 71.

Wednesday, April 10

08:30-10:00, Main Auditorium

Clinical Focus Session

CF 1501 Kidney cancer - current controversies

Moderators: E. de Kerviler (Paris/FR), D.A. Gervais (Boston, MA/US)

- 1501.1 Guidelines: from an IO perspective D.A. Gervais (Boston, MA/US)
 - 1501.2 Understanding malignant potential with biopsy histological viewpoint S. Flemina (Dundee/UK)
 - 1501.3 Lessons learned from experimental studies to optimise cryoablation protocols E. de Kerviler (Paris/FR)
- 🔛 1501.4 Ablation: which energy when? G.D. Schmit (Rochester, MN/US)
 - 1501.5 Ablation in the era of robotic partial nephrectomy: surgical perspective A. Bex (Amsterdam/NL)
- 1501.6 Ablation in the era of robotic partial nephrectomy: **IO** perspective D.J. Breen (Southampton/UK)

08:30-10:00. Auditorium II **Clinical Focus Session**

CF 1502 Immunotherapy: where are we heading (research)

Moderators: U. Martens (Heilbronn/DE), B.J. Wood (Bethesda, MD/US)

- 1502.1 HIT-IT (human intratumoural immunotherapy): ESMO recommendations T. de Baère (Villejuif/FR)
- 1502.2 Drugs for intratumoural injection S. Champiat (Villejuif/FR)
- 1502.3 Intratumoural viral injections: concepts and results
- 1502.4 Priming immune response with ablation S.N. Goldberg (Jerusalem/IL)
- 1502.5 Liquid biopsies R. Corcoran (Boston, MA/US)



08:30-10:00, Safe Sedation (G 107)

Hands-on Training SED-HO 4 Safe sedation application during IR procedures

Coordinators: M. Heinrichs (Mainz/DE), W. Heinrichs (Mainz/DE)

10:30-12:00, Main Auditorium Clinical Focus Session CF 1601 Cancer pain management

> Moderators: D. Filippiadis (Athens/GR), S. Masala (Rome/IT)

1601.1 Systemic therapies for bone metastases A. Antonuzzo (Pisa/IT)

[1601.2 IO and/or radiotherapy: when and where S. Marcia (Cagliari/IT)

1601.3 Nerve blocks and neurolysis A.D. Kelekis (Athens/GR)

1601.4 Bone metastases: thermal ablation with or without consolidation

U. Pua (Singapore/SG) 1601.5 Embolisation in pain palliation in MSK tumours R. García Marcos (Valencia/ES)

1601.6 Percutaneous consolidations: cement, screw... R.-T. Hoffmann (Dresden/DE)

10:30-12:00, Auditorium II Clinical Focus Session CF 1602 Emergency in oncology

> Moderators: R. Iezzi (Rome/IT), A.G. Ryan (Waterford City/IE)

[1602.1 Head and neck bleeding A. Hakimé (Villejuif/FR)

1602.2 Haemoptysis R. Cioni (Pisa/IT)

1602.3 How to manage ruptured HCC J. Urbano (Madrid/ES)

1602.4 Superior vena cava syndrome W. Prevoo (Amsterdam/NL)

1602.5 Abdominal and pelvic bleeding A.G. Ryan (Waterford City/IE)

10:30-12:00, Safe Sedation (G 107) **Hands-on Training** SED-HO 5 Safe sedation application during IR procedures

> Coordinators: M. Heinrichs (Mainz/DE), W. Heinrichs (Mainz/DE)

10:30-12:00, Auditorium III (G 103) **Hands-on Device Training** TA-HDT 5 Tumour ablation - Cryoablation and laser ablation

> Coordinators: F.M. Gómez (Barcelona/ES), A.H. Mahnken (Marburg/DE)

13:00-13:45, Main Auditorium **SY 1701 Satellite Symposium**

For the programme please refer to page 73.

13:45-14:30, Main Auditorium **SY 1702 Satellite Symposium**

For the programme please refer to page 73.

13:00-14:30, Safe Sedation (G 107)

Hands-on Training

SED-HO 6 Safe sedation application during IR procedures

Coordinators: M. Heinrichs (Mainz/DE), W. Heinrichs (Mainz/DE)

15:00-16:30, Main Auditorium

Multidisciplinary Tumour Board

MTB 1801 MSK

Coordinators: M.R. Callstrom (Rochester, MN/US), S. Masala (Rome/IT)

Panellists: M. Borensztein (Buenos Aires/AR), J. Garnon (Strasbourg/FR), J.W. Jennings (Saint Louis, MO/US), A.N. Kurup (Rochester, MN/US), P.J. Papagelopoulos (Athens/GR)



15:00-16:30, Auditorium II **Video Learning Session** VL 1802 How I do it

Moderators: P. Chevallier (Nice/FR), W. Prevoo (Amsterdam/NL)

- 1802.1 Liver triple preparation technique for extended resection of Klatskin tumour B. Guiu (Montpellier/FR)
- 1802.2 Lung difficult locations F. Deschamps (Villejuif/FR)
- 1802.3 Liver guidance and targeting for ablation G. Tsoumakidou (Lausanne/CH)
- 1802.4 Liver solving complex anatomical problems in TACE I. Bargellini (Pisa/IT)
- 1802.5 Bone pinning and stabilisation *X. Buy (Bordeaux/FR)*
- 1802.6 Kidney T1b T.D. Atwell (Rochester, MN/US)

15:00-16:30, Auditorium III (G 103) **Hands-on Device Training** TA-HDT 6 Tumour ablation - Image guidance

> Coordinators: A. Hakimé (Villejuif/FR), L. Solbiati (Rozzano/IT)

17:00-18:30, Main Auditorium Clinical Focus Session CF 1901 Response assessment and follow-up imaging

Moderators: L. Crocetti (Pisa/IT), K. Malagari (Athens/GR)

1901.1 Ablation for MSK tumours

A. Feydy (Paris/FR)

1901.2 TACE

Y. Arai (Tokyo/JP)

1901.3 Radioembolisation

R. Salem (Chicago, IL/US)

1901.4 Thermal ablation for lung cancer
R.D. Suh (Los Angeles, CA/US)

1901.5 Thermal ablation for renal cancer
N. Patel (London/UK)

Panel discussion

17:00-18:30, Auditorium II Free Paper Session FP 1902 Free Paper Session 2

Moderators: M. Meijerink, Amsterdam/NL H. Rio Tinto (Lisbon/PT)

- 1902.1 Percutaneous irreversible electroporation to treat locally advanced pancreatic cancer: the PANFIRE-2 trial final results
 - A. Ruarus, L. Vroomen, R. Puijk, M. de Jong, B. Zonderhuis, M.G.H. Besselink, M.P. van den Tol. G. Kazemier, H. Scheffer, M. Meijerink; Amsterdam/NL
- 1902.2 Irreversible electroporation of locally advanced pancreatic cancer transiently alleviates immune suppression and creates a window for anti-tumor T-cell activation
 - H. Scheffer, A. Stam, L. Vroomen, B. de Bruijn, P. van den Tol, G. Kazemier, M. Meijerink, T. de Gruijl; Amsterdam/NL
- 1902.3 Additional hepatic 166Ho-radioembolization in patients with neuroendocrine tumours treated with 177Lu-DOTATATE: a single-center, interventional, non-randomized, non-comparative, open-label, phase II study (HEPAR PLUS trial) A.J.A.T. Braat¹, R. van Rooij¹, R. Bruijnen¹, R.S. van Leeuwaarde¹, W.W. de Herder², M. Tesselaar³, H.W.A.M. de Jong¹, M.G.E.H. Lam¹; ¹Utrecht/NL, ²Rotterdam/NL, ³Amsterdam/NL
- 1902.4 Percutaneous hepatic perfusion with melphalan in patients with unresectable liver metastases from ocular melanoma using the Delcath System's second-generation hemofiltration system: a prospective phase II study T.S. Meijer, M.C. Burgmans, B. Boekestijn, A.R. van Erkel, L.-F. de Geus-Oei, H. Handgraaf, D.E. Hilling, E.M. de Leede, J. Lutjeboer, C.H. Martini, R.W. van der Meer, E.M. Sitsen, F.M. Speetjens, F.G.J. Tijl, E. Kapiteijn, A.L. Vahrmeijer; Leiden/NL

- 1902.5 Prospective and multicentric evaluation of 100-μ
 DEB-TACE in patients with non-resectable HCC
 J. Urbano¹, J. Echevarria-Uraga², J.J. Ciampi-Dopazo³,
 J. Sanchez Corral¹, B. Peña Baranda², V. Nacarino⁴,
 R. González Costero¹, J.J. Muñoz Ruiz-Canela⁵,
 J. Cuesta Pérez¹, L. López Carreira⁶; ¹Madrid/ES,
 ²Bilbao/ES, ³Toledo/ES, ⁴Sevilla/ES, ⁵Málaga/ES,
 ⁶Luao/ES
- 1902.6 Dose-effect relationship for hepatic holmium-166 radioembolization in colorectal cancer patients <u>C. van Roekel</u>, R. Bastiaannet, M. Smits, S. Elias, R. Bruijnen, J. Prince, H. de Jong, M.G.E.H. Lam; Utrecht/NL
- 1902.7 RFA vs robotic partial nephrectomy for T1a renal cell carcinoma: a propensity score-matched comparison of mid-term outcome B.K. Park: Seoul/KR
- 1902.8 Therapeutic outcomes of thermal ablation for endophytic vs exophytic renal cell carcinoma <u>W. Zhou</u>, S. Herwald, R. Arellano; Boston, MA/US
- 1902.9 Transarterial embolization of prostate with biodegradable flutamide-loaded PLA/PLGA microspheres for benign prostate hyperplasia: preliminary study in normal swine model F. Nurili¹, T. Acar², S. Derman², I. Yurdaisik², A. Bas², H. Cakiroglu³, S. Ozkanli², O. Aras¹; ¹New York, NY/US, ²Istanbul/TR, ³Adapazari/TR
- 1902.10 An ex vivo bench and perfused liver assessment and extension of the ablation zone by "EdgeBoost" with IR-Circle: a new bipolar ablation device K.H. Altoukhi, J. Akhter, A. Mekkawy, N.A. Alzahrani, S.J. Valle, D.L. Morris; Sydney, NSW/AU

17:00-19:00, Auditorium III (G 103)

Basic Course

BC 1903 Radioembolisation

- 1903.1 Currently available tools: resin glass, Yttrium, Holmium and others R. Duran (Lausanne/CH)
- 🔝 1903.2 Dosimetry for radiologists: understanding the dose J. Bell (Manchester/UK)
- [[...] 1903.3 Radioembolisation in HCC patients: good indications and good practice C. van der Leij (Maastricht/NL)
- 1903.4 Radioembolisation out of HCC: CRC, ICC, melanoma and others... L. Tselikas (Villejuif/FR)

Thursday, April 11

08:30-10:00, Auditorium II

Clinical Focus Session

CF 2101 New indications: localised prostate cancer

Moderators: X. Cathelineau (Paris/FR), J.J. Fütterer (Nijmegen/NL)

- 2101.1 Natural history of localised prostate cancer R. Popert (London/UK)
- 2101.2 Imaging gland disease
 S.W.T.P.J. Heijmink (Amsterdam/NL)
- 2101.3 Biopsy of prostate: when and how *R. Popert (London/UK)*
- 2101.4 Surgery or radiotherapy: which is the standard of care?
 - X. Cathelineau (Paris/FR)
- 2101.5 IO options for localised disease J.J. Fütterer (Nijmegen/NL)

08:30-10:00, Main Auditorium

Clinical Focus Session

CF 2102 Quality issues, research and patterns of practice in interventional oncology

Moderators: A. Adam (London/UK), L.M. Kenny (Brisbane, QLD/AU)

- 2102.1 The role of IR in a centre of excellence in cancer care
 - C.T. Sofocleous (New York, NY/US)
- 2102.2 Research in IO the potential synergy with radiation oncology

 N.I. Brown (Brisbane, OLD/AU)
 - N.I. Brown (Brisbane, QLD/AU)
- 2102.3 An exemplar of collaboration in the treatment of lung cancer: heat, photons or both? S.B. Solomon (New York, NY/US)
- 2102.4 Quality assurance the key to front-line status in oncology

 L.M. Kenny (Brisbane, QLD/AU)

Panel discussion



10:30-12:00, Main Auditorium

MM 2201 Morbidity & Mortality Conference

Coordinators: M. Burrel (Barcelona/ES), J. Golzarian (Minneapolis, MN/US)

- 2201.1 Avoiding complications in renal ablations M. Borensztein (Buenos Aires/AR)
- 2201.2 Large retroperitoneal tumour: ablation feasible? R. Freitas (Sao Paulo/BR)
- 2201.3 IRE ablation of superficial HCC; think first F. Holmquist, A. Nilsson (Lund/SE)
- 2201.4 Complications of a long term biliary drain in the context of pancitopenic patient A. Olavarria Delgado (Madrid/ES)
- 2201.5 Hepatic artery pseudoaneurysm after trans arterial chemoembolisation M. Burrel (Barcelona/ES)

ECIO 2020

European Conference on Interventional Oncology

April 26-29, 2020 Nice, France



Posters

ECIO 2019 Posters will be presented electronically in the Poster Area throughout the congress.

Due to withdrawn abstracts, certain numbers are missing.

Kidney

- P-1 Safety of percutaneous renal cryoablation: an international multicentre experience from the EuRECA retrospective database J. Garnon¹, D.J. Breen², A. King², B. Lagerveld³, M.J.L. van Strijen⁴, T. Nielsen⁵, F. Keeley⁶; ¹Strasbourg/FR, ²Southampton/UK, ³Amsterdam/NL, ⁴Nieuwegein/NL, ⁵Aarhus/DK, ⁶Bristol/UK
- P-2 A web-based and user-friendly planning tool to predict outcome for percutaneous cryoablation of renal tumours including validation of the simulation model

 T.J. van Oostenbrugge¹, J. Heidkamp¹, P. Voigt²,
 M. Moche², P. Weir³, P. Mariappan³, R. Flanagan³,
 M. Pollari⁴, S. Payne⁵, R. Ellerweg⁶, M. Kolesnik⁶,
 H. Langenhuijsen¹, S. Jenniskens¹, J.J. Fütterer¹;
 ¹Nijmegen/NL, ²Leipzig/DE, ³Dublin/IE, ⁴Helsinki/FI,
 ⁵Oxford/UK, ⁶Sankt Augustin/DE
- P-3 What could be the optimal type of embolic agent and interval for transarterial embolization (TE) prior to CT-guided thermal ablation (TA) of renal tumors? histopathologic considerations on the basis of pre-operative renal tumor embolization data C.M. Sommer, G.M. Richter², F. Pan¹, D.F. Vollherbst¹, T.D. Do¹, P.L. Pereira³, H.U. Kauczor¹, K. Kriegsmann¹, G. Hatiboglu¹, M. Kriegsmann¹; ¹Heidelberg/DE, ²Stuttqart/DE, ³Heilbronn/DE
- P-4 Percutaneous thermoablation of small renal masses (T1a) in surgical candidate patients: oncologic outcomes

 <u>R.N. Zangiacomo</u>, G.L.P. Martins, P.C.C. Viana,

 M.A. Arap, W. Nahas, M. Srougi, G.G. Cerri, M.R. Menezes;

 São Paulo/BR

- P-5 Safety and oncologic efficacy using an innovative liquid nitrogen-based cryogenic device in SRMs <u>T.L. Gasper</u>¹, R. Sachner¹, S. Croitoru¹, K. Dorfman¹, Y. Halpern¹, S. Shprits¹, O. Avitan¹, Z. Bahouth¹, O. Nativ¹, A. Zisman²; ¹Haifa/IL, ²Be'er Ya'akov/IL
- P-6 A comparative evaluation of procedural and therapeutic outcomes of thermal ablation for T1b vs T1a renal cell carcinoma W. Zhou, S. Herwald, R. Arellano; Boston, MA/US
- P-7 Image-guided thermal ablation for renal cell cancer: evaluation of long-term oncological outcomes in patients with at least 5 years of follow-up W. Zhou, S. Herwald, R. Arellano; Boston, MA/US

Liver

- P-8 Comparison of four different transarterial regimens for treatment of hepatocellular carcinoma a retrospective study

 <u>A. Almat'hami</u>', H. Alobaidi', Y. Alzahrani', R. Zener², D. Wiseman², A. Mujoomdar²; 'Riyadh/SA, ²London, ON/CA
- P-9 Coaxial liver biopsy vs. direct puncture for liver biopsy: a retrospective cohort study R. Varela Ponte¹, N. Martinez Lago², M. Vieito Villar³, J.M. Carreira Villamor¹; ¹Santiago De Compostela/ES, ²A Coruña/ES, ³Barcelona/ES
- P-10 Comparison of the efficacy and prognostic factors of transarterial chemoembolization plus microwave ablation vs rhenium transarterial radioembolisation alone in patients with a large solitary or multinodular hepatocellular carcinomas

 B.R. Raveendran Sheela; Kochi/IN
- P-11 Intermediate/advanced HCC/SIRT and balloonocclusive microcatheter: the right way? <u>A. Paladini</u>, G.E. Vallati², G. Pizzi², F. Cappelli²; ¹Novara/IT, ²Rome/IT



P-12 Response to SIRT (Selective Internal Radiation Therapy) in patients affected by unresectable multifocal intra-hepatic cholangiocarcinoma: results of a preliminary study

<u>A. Paladini</u>, G.E. Vallati², G. Pizzi², F. Cappelli²;

'Novara/IT, ²Rome/IT

- P-13 Health-related quality of life evaluation in "left" versus "right" access for percutaneous transhepatic biliary drainage using EORTC QLQBIL-21 questionnaire <u>D.G. Castiglione</u>, C. Gozzo, G. Caltabiano, S. Palmucci, A. Basile, A. Musumeci, L. Mammino; 'Palermo/IT, 'Catania/IT
- P-14 Propofol vs midazolam sedation for percutaneous radiofrequency (RFA) and microwave ablation (MWA) in patients with hepatic malignancies: a single-center comparative analysis of two historical cohorts <u>R. Puijk</u>, V. Ziedses des Plantes, S. Nieuwenhuizen, A. Ruarus, L. Vroomen, M. de Jong, B. Geboers, C. Hoedemaker-Boon, D. Thöne-Passchier, C. Gerçek, J. de Vries, H. Scheffer, P. van den Tol, M. Meijerink; Amsterdam/NL
- P-15 Major impact of personalised dosimetry on the targeted tumor response using 90Y loaded glass microspheres SIRT in HCC: results of a prospective and multicentric randomized study E. Garin¹, L. Tselikas², B. Guiu³, J. Chalaye⁴, J. Edeline¹, S. Laffont¹, T. de Baère², C. Cassinotto³, T. Tacher⁴, M. Terroir-Cassou-Mounat¹, F. Ben Bouallègue³, G. Amadeo⁴, X. Palard¹, B. Campillo-Gimenez¹, Y. Rolland¹; ¹Rennes/FR, ²Villejuif/FR, ³Montpellier/FR, ⁴Créteil/FR
- P-16 Ablation of colorectal liver metastases by irreversible electroporation: final results of the COLDFIRE-2 trial M. Meijerink, A. Ruarus, L. Vroomen, R. Puijk, B. Geboers, J. de Vries, K. Nielsen, G. Kazemier, K. van Lienden, P. van den Tol, H. Scheffer; Amsterdam/NL

- P-17 Combined percutaneous microwave ablation (MWA) and transarterial chemoembolization (TACE) for hepatocellular carcinoma
 <u>G. Poggi</u>, B. Montagna, I. Palumbo, L. Franchi Bononi;
 Pavia/IT
- P-18 Pharmacokinetic analyses in patients with unresectable hepatocellular carcinoma treated by TACE with doxorubicin drug-eluting microspheres <u>K. Malagari</u>¹, M. Burrel², M. Reig², R. Duran³, A. Digklia³, A. Denys³, M. Brunet², J. Bruix²; ¹Athens/GR, ²Barcelona/ES, ³Lausanne/CH
- P-19 Treatment of unresectable HCC with doxorubicineluting microspheres: a single-center experience <u>G.A. Tovar</u>¹, J. Sampere¹, A. García Gámez¹, V. Benito Santamaría¹, D. Balaguer¹, J. Villalba²; ¹Badalona/ES, ²Barcelona/ES
- P-20 Percutaneous stereotactic CT-based microwave ablation for neuroendocrine liver metastasis M. Maurer, A. Lachenmayer, G. Beldi, D. Candinas, C. Kim-Fuchs; Bern/CH
- P-21 Chemosaturation percutaneous hepatic perfusion (CS-PHP) with Melphalan: evaluation of 2D-perfusion angiography (2D-PA) as a tool to detect leakage of venous double-balloon catheter

 <u>C.L.A. Dewald</u>, S.K. Maschke, T.C. Meine, J. Renne, M. Kirstein, F. Wacker, B. Meyer, J.B. Hinrichs; Hanover/DE
- P-22 Stereotactic image-guided microwave ablation for malignant liver tumors: can computer-assistance broaden treatment eligibility?

 P. Tinguely, A. Lachenmayer, V. Banz, S. Weber,
 D. Candinas, M. Maurer; Bern/CH



- P-23 LifePearl® Anthracyclin Registry in selective chemo-embolization of patients with unresectable hepatocellular carcinoma: PARIS study preliminary results
 - T. de Baère¹, L. Tselikas¹, G. Verset², B. Guiu³, M. Ronot⁴, P. Chevallier⁵, G. Sergent⁶, P. Goffette²; 'Villejuif/FR, ²Brussels, BE, ³Montpellier/FR, ⁴Clichy/FR, ⁵Nice/FR, ⁶Lille/FR
- P-24 Comparison of the efficacy and prognostic factors of transarterial chemoembolization plus microwave ablation vs transarterial chemoembolization alone in patients with a large solitary or multinodular hepatocellular carcinoma

 L. Zheng, H.L. Li, C.Y. Guo; ZhengZhou/CN
- P-25 Analysis of risk factors for survival after TIPS for variceal bleeding

 M.B. Pitton, J. Moehricke, S. Schotten, T. Zimmermann, J. Mittler, C. Düber; Mainz/DE
- P-26 Predictive factors of survival after TIPS for refractory ascites in end-stage liver disease <u>M.B. Pitton</u>, M. Moddemann, S. Schotten, J. Mittler, T. Zimmermann, R. Kloeckner, C. Düber; Mainz/DE
- P-27 A resident's guide to hepatic venous pressure measurement: utility, technique, pitfalls and outcome studies

 A. Mai, P. Cramer, T. Braaten, A. Pillai; Houston, TX/US
- P-28 Usefulness and safety of biliary percutaneous transluminal forceps biopsy in diagnosis of malignant biliary obstruction: single-centre experience <u>F. Corvino</u>, F. Giurazza, M. Silvestre, G. Cangiano, E. Cavaglia, A. Corvino, R. Niola; Naples/IT
- P-29 Percutaneous electrochemotherapy of hepatocellular carcinoma at hepatic hilum

 <u>L. Tarantino</u>¹, A. Nasto¹, G. Busto¹, R. Fristachi¹, L. Cacace¹, P. Tarantino², R.A. Nasto³, S. Bortone¹, M.R. Romano¹, M. Fabozzi¹; ¹Pagani/IT, ²Milan/IT, ³Naples/IT

- P-30 CEUS monitoring of intratumoral microcirculation after electroporation of liver tumors

 <u>L. Tarantino;</u> Pagani/IT
- P-31 Survival, tumour response, safety and prognostic factors 70-150µm versus 100-300µm particles for Doxorubicin drug-eluting bead TACE in patients with unresectable hepatocellular carcinoma: a four-year Australian experience Y.R. Huo, H. Xiang, M.V. Chan, C. Chan; Sydney, NSW/AU
- P-32 Predictive factors of complete response of hepatic transarterial chemoembolizations with drug eluting beads in patients with hepatocellular carcinoma L.S. Alberton, L.G.M. Valle, G.G. Moratti, P.M. Falsarella, R.B. Martins, V.D.O. Carvalho, C.A. Lima, L. Lembrança, J.M.M. Leal Filho, F.L. Galastri, B.B. Affonso, F. Nasser; São Paulo/BR
- P-33 Five-year survival post chemoembolization with HepaSphere 30.60 for HCC not amenable to curative treatments

 K. Malagari¹, H. Moschouris², T. Kiakidis¹, S. Howard³,
 A.D. Kelekis¹, D. Filippiadis¹, A. Chatziioannou¹,
 V. Vergadis¹, E. Brountzos¹, N. Kelekis¹; ¹Athens/GR,
 ²Pireus/GR, ³Boston, MA/US
- P-34 Percutaneous radiofrequency ablation for hepatic tumors: factors affecting baseline impedance <u>J.W. Seo</u>, S. Hwang; Goyang-Si/KR
- P-35 Balloon-occluded transcatheter arterial chemoembolization (b-TACE) for hepatocellular carcinoma performed with polyethylene-glycol epirubicin-loaded drug-eluting microsphere:

 3-6 months oncological results

 P. Lucatelli, G. de Rubeis, L. Ginanni Corradini, B. Rocco, A. Cannavale, P. Nardis, M. Corona, M. Bezzi; Rome/IT
- P-36 Uncommon radiologic findings that happened in the RFA sites in the liver Y.M. Shin, S.J. Lee, S.Y. Kim, H.J. Won, P.N. Kim; Seoul/KR



P-37 Safety of percutaneous hepatic perfusion with melphalan in patients with unresectable liver metastases from ocular melanoma using the Delcath System's second-generation hemofiltration system: a prospective non-randomized phase II study T.S. Meijer, M.C. Burgmans, M. Fiocco, L.-F. de Geus-Oei, E. Kapiteijn, E.M. de Leede, C.H. Martini, R.W. van der Meer, F.G.J. Tijl, A.L. Vahrmeijer; Leiden/NL

- P-38 Intra-arterial peptide receptor radionuclide therapy for neuroendocrine tumor liver metastases <u>S.C. Ebbers</u>, M.W. Barentsz, A.J.A.T. Braat, M.G.E.H. Lam; Utrecht/NL
- P-39 Chemoembolization using polyethylene glycol (PEG)-embolizing microspheres loaded with anthracyclines in HCC: predictive factors of response and efficacy evaluation

 <u>A.-M. Bucalau</u>, I. Tancredi, R. Leveque, M. Pezzullo,
 G. Verset; Brussels/BE
- P-40 Efficacy of the radioembolic treatment of "large" monofocal hepatocarcinoma in BCLC A-stage patients: monocentric experience

 A. Vit, T. Gorgatti, V. Gavrilovic, A. Pellegrin, F. Rosella, M. Sponza; Udine/IT
- P-41 The value of MDCT three-dimensional vascular remodeling in TACE for HCC
 T. Qiang; Nanchang/CN
- P-42 Balloon-occluded transarterial chemoembolization using polyethylene glycol embolizing microspheres (B-DEM-TACE) for hepatocellular carcinoma: a prospective monocentric study of safety, feasibility and early outcomes

 <u>G. Verset</u>, A.-M. Bucalau, M. Pezzullo, R. Leveque,
 I. Tancredi; Brussels/BE

- P-43 Pain scores during continuous and pulsed mode of microwave ablation in the liver: a comparative study <u>M. Tsitskari</u>, D. Filippiadis, G. Velonakis, L. Reppas, A.D. Kelekis, E. Brountzos, N. Kelekis; Athens/GR
- P-44 Y-90 radioembolization in advanced-stage HCC: does portal vein thrombosis affect survival? <u>F. Somma</u>, V. Stoia, R. D'Angelo, F. Fiore; Naples/IT
- P-45 Portal vein embolisation (PVE) anatomical considerations and embolisation techniques to achieve maximum FLR hypertrophy

 C.L. Bent, A. Shawyer; Bournemouth/UK
- P-46 Holmium-166 radioembolization (Ho166-RE) in HCC: 12-month follow-up and outcome data <u>C.G. Radosa</u>¹, J.C. Radosa², S. Grosche-Schlee¹, K. Zöphel¹, V. Plodeck¹, J.P. Kühn¹, R.-T. Hoffmann¹; ¹Dresden/DE, ²Homburg/DE
- P-47 Biopsy of suspect intrahepatic power of Lipiodolenhancement in CT-guided biopsies of unspecified suspect intrahepatic lesions: improvement of accuracy and safeness <u>M.C. Langenbach</u>, T.J. Vogl, A. Buchinger, L.M. Basten, R. Hammerstingl, T. Gruber-Rouh; Frankfurt/DE
- P-48 Treatment options for intermediate (3-5cm) unresectable colorectal liver metastases (CRLM): stereotactic ablative body radiotherapy (SABR) vs microwave ablation (MWA) a comparative review <u>S. Nieuwenhuizen</u>, R. Puijk, B. Geboers, A. Ruarus, N. Haasbeek, A. Bruynzeel, M.P. van den Tol, M. Meijerink; Amsterdam/NL
- P-49 Comparison of microwave and radiofrequency ablation for the treatment of liver metastases: randomized prospective study (MIRA study)

 <u>T.J. Vogl</u>, Y. Jaraysa, S. Martin, A. Mehmedovic,
 N.-E. Nour-Eldin, T. Gruber-Rouh, R. Hammerstingl;
 Frankfurt/DE



Lung

P-50	CT-guided pulmonary nodule microcoil localization
	S.R. Alharbi; Riyadh/SA

- P-51 CT-guided lung biopsy using a 20-gauge needle biopsy: is it possible to obtain sufficient material for genetic analysis?

 C.A. Lima, J.R. de Andrade, L.G.M. Valle, P.M. Falsarella, L.L. Pinheiro, G.M. Gilberto, V.D.O. Carvalho, G.F. Mendes, P.R.B. Silverio, F.A.C. Vieira, A.R. Junior, L.R. Socolowski, R.G. Garcia; São Paulo/BR
- P-52 Interventional PET-CT for lung and mediastinal tumours biopsy planning

 M. Cherkashin, N. Berezina, D. Puchkov,
 D. Kuplevatskaya; St. Petersburg/RU
- P-53 Pneumothorax and pulmonary hemorrhage after CT-guided lung biopsy: incidence, clinical significance and correlation

 <u>V. Sabatino</u>, U. Russo, F.V. D'Amuri, A. Bevilacqua, F. Pagnini, G. Milanese, R. Nizzoli, G. Pedrazzi, M. De Filippo; Parma/IT
- P-55 Outcome of ablation of 5-7 ipsilateral lung metastases at a single ablation session

 <u>A. Gillams</u>¹, S. Smith²; ¹London/UK, ²lpswich/UK
- P-56 Comparison between CBCT and fusion PET/CT-CBCT guidance for lung biopsies

 <u>A. Muollo</u>¹, A. Beneventi¹, N. Casamassima¹, E. Macchi¹,
 F. Piacentino¹, F. Fontana¹, C. Floridi², C. Fugazzola¹,
 G. Carrafiello²; ¹Varese/IT, ²Milan/IT
- P-57 Radiofrequency and microwave ablation of soft-tissue sarcoma lung metastases: safety and oncological outcomes

 T. Glover, N. Butterfield, N. Khan, C. Benson, J. McCall,

R. Jones, N. Fotiadis; London/UK

Musculoskeletal

- P-58 Overview of percutaneous radiofrequency ablation for the treatment of osteoid osteomas <u>M.A.O. Kasem</u>; Cairo/EG
- P-59 Osteoid osteoma treated with radiofrequency ablation in non-operating room anesthesia: our experience in 61 cases

 <u>A. Paladini</u>, F. Cappelli², D. Beomonte Zobel², G.E. Vallati², G. Pizzi²; ¹Novara/IT, ²Rome/IT
- P-60 Rapid pain improvement in patients treated for painful bone metastases with the Medtronic OsteoCool RF ablation system: the OPuS One study S. Bagla¹, J. Levy², T. Hopkins³, F. Massari⁴, A. Vogel⁵, A. Bress⁶, R. Dixon⁻, J. Mitchell³, P. Sunenshine⁶, J. Barr¹⁰, N. Tran¹¹, J. Morris¹², H. Berrier¹³, T. Brelje¹³, K. Schwartz¹³; ¹Woodbridge, VA/US, ²Cumming, GA/US, ³Durham, NC/US, ⁴Worcester, MA/US, ⁵Reno, NV/US, ⁶Fullerton, CA/US, ¬Chapel Hill, NC/US,
 8Atlanta, AL/US, 9Phoenix, AZ/US, ¹ºDallas, TX/US,
 ¹¹Tampa, FL/US, ¹²Rochester, MN/US, ¹³Fridley, MN/US
- P-61 Effect of transarterial bland embolization of renal cell carcinoma bone metastases on systemic biomarkers of tumor immunity: can tumor embolization affect immunotherapy response?

 R. AlHalawani, R. Sheth, S. Yevich; Houston, TX/US

Novel therapies

P-62 Tunnelled, non-cuffed internal jugular catheter in oncological patients for short- to mid-term vascular access: an interim report of an off-label application of the PICC

X.Z. Low, C.W. Too, A. Patel, A. Gogna, R. Lo, K. Damodharan, S. Chan, S. Chandramohan, S. Leong, N. Kumar, J. Chua, K.D. Zhuang, F.G. Irani; Singapore/SG



P-63 A phase I/II study of direct injection of Bromelain and Acetylcysteine in patients with inoperable mucinous peritoneal tumours
S.J. Valle, J. Akhter, D. Glenn, M.A. Power, S. Lodh,
W.S. Liauw, K.H. Altoukhi, D.L. Morris; Sydney, NSW/AU

- P-65 Pulsed electrical fields in oncology: reversible and irreversible electroporation, electrochemotherapy, electrogenotherapy and electrotransfection <u>B. Geboers</u>¹, H. Scheffer¹, A. Ruarus¹, S. Nieuwenhuizen¹, R. Puijk¹, T. de Gruijl¹, D. Miklavčič², B. Rubinsky³, R.V. Davalos⁴, M. Meijerink²; ¹Amsterdam/NL, ²Ljubljana/Sl, ³Berkeley, CA/US, ⁴Blacksbura, VA/US
- P-66 Abscopal effect of immunostimulating laser thermotherapy on liver metastasis in pancreatic cancer: a case report and study protocol for a randomised controlled trial

 <u>B. Gonçalves</u>, M.J. Sousa, M. Machado, L. Santos;

 Porto/PT

Other organs

- P-67 Percutaneous endobiliary radiofrequency ablation (PE-RFA) combined with biliary stenting for palliation of malignant biliary obstruction: feasibility, safety and early results

 C. Sallemi J. Monfardini M. Calandri F. Soncin P.
 - <u>C. Sallemi</u>¹, L. Monfardini¹, M. Calandri², E. Soncin², D. Righi², P. Fonio²; ¹Brescia/IT, ²Turin/IT
- P-68 Radiofrequency ablation of primary parathyroid adenoma: preliminary results for patients ineligible for surgery

 E.J. Ha: Suwon/KR
- P-69 Pancreaticoduodenal arcade as a challenging but effective alternate route for performing TACE in patients with unfavorable celiac axis anatomy *A. Johri, B.J. Amos, A. Burdette; Hershey, PA/US*

- P-70 Intrahepatic Mitomycin C infusion in liver dominant metastatic breast cancer: factors influencing outcome <u>B.M. Aarts</u>, E.G. Klompenhouwer, R.C. Dresen, A. Laenen, R.G.H. Beets-Tan, K. Punie, P. Neven, H. Wildiers, G. Maleux, Tamsterdam/NL, Leuven/BE
- P-71 Prospective, monocentre pilot study of intrahepatic Mitomycin C infusion after radioembolization with Y-90 in chemo refractory liver dominant metastatic breast cancer patients

 B.M. Aarts¹, E.G. Klompenhouwer¹, R.C. Dresen², C. Deroose², A. Laenen², R.G.H. Beets-Tan¹, P. Neven², H. Wildiers², G. Maleux²; ¹Amsterdam/NL, ²Leuven/BE
- P-72 Gastric cancer bleeding: treatment with arterial embolization

 M.G. Song, T.-S. Seo, S.-J. Park; Seoul/KR
- P-73 The diagnostic role of omental biopsy and guidance in the management of patients with suspected gynaecological malignancy: a single-center experience

 O. Sarioglu, H. Sahin, A.E. Capar, U. Belet; Izmir/TR
- P-74 Stent performance in palliative transhepatic treatment of malignant biliary obstruction: covered vs uncovered metallic stents

 <u>A. Elkilany</u>, M. Al-Warraky², D. Geisel¹, T. Denecke¹;

 ¹Berlin/DE, ²Menoufia/EG
- P-75 Effectiveness and security of CT-guided percutaneous implantation of radioactive I-125 seeds in locally advanced pancreatic carcinoma

 Z. Liao; Chengdu, Sichuan Province/CN
- P-76 Clinical efficacy and safety of transarterial chemotherapy in the treatment for recurrent or persistent ovarian cancer

 Y.S. Jeon; Gunpo/KR



P-79 The right innominate vein as a safe and viable alternative to the right internal jugular vein for ultrasound-guided totally implantable venous access devices in adult patients with cancer S. Xingwei, J. Yong; Suzhou/CN

- P-80 Efficacy and safety of ultrasound-guided totally implantable venous access ports via the right innominate vein in adult patients with cancer: our single-center experience and protocol S. Xingwei, J. Yong; Suzhou/CN
- P-81 PSMA-PET/CT and diffusion MRI targeting for conebeam CT-guided bone biopsies of castration resistant prostate cancer patients <u>T.R.F. van Steenbergen</u>, M. Smits, T.W.J. Scheenen, J. Nagarajah, I.M. van Oort, M.M. Rovers, N. Mehra, J.J. Fütterer; Nijmegen/NL
- P-82 Hemostatic endovascular embolization of branches of the external carotid artery in patients with the nasopharyngeal tumors

 <u>A. Pankov</u>, A. Shelesko, N. Zakaryan, E. Molokhoev, A. Davtyan, V. Kirakosyan; Moscow/RU
- P-84 Experience in five years of retinoblastomas management through intra-arterial chemotherapies in two health institutions of Lima, Peru P.A. Teran Chávez, M.A. Bedriñana Gomez, D. Quiroz Cerna, C.R. Pascual Morales, G.A. Rojas Salinas, J.C. Tan Kuong, G. Araujo Almeyda, S.C. Alfaro Ita: Lima/PE

Pre-clinical and experimental

P-85 Embolization of rabbit renal arteries to test feasibility and effects of CT-visible doxorubicin-eluting montmorillonite microparticles

<u>F. Nurili</u>, G. Bekaroglu², S. Isci², I. Caymaz², A. Bas²,
I. Yurdaisik², O. Aras¹; ¹New York, NY/US, ²Istanbul/TR

- P-86 Multifunctional iron oxide nanoparticle-embedded PVP-HEC microparticles as a drug-eluting embolic material
 - <u>F. Nurili</u>¹, G. Bekaroglu², S. Isci², A. Bas², I. Caymaz², S. Ozkanli², O. Aras¹; ¹New York, NY/US, ²Istanbul/TR
- P-87 Effectiveness and safety of transarterial embolization with Bleomycin-loaded PLA/PLGA microspheres for treatment of vascular malformation using a porcine spleen model

 F. Nurili¹, T. Acar², S. Derman², A. Bas², I. Caymaz²,
 S. Ozkanli², H. Cakiroglu³, I. Yurdaisik², O. Aras¹;

¹New York, NY/US, ²Istanbul/TR, ³Adapazari/TR

- P-88 Catheter-directed gastric artery embolisation with octreotide acetate-loaded PLA/PLGA (poly(lactide-co-glycolide) acid) microspheres with slow sustained release properties

 F. Nurili¹, T. Acar², S. Derman², A. Bas², I. Caymaz²,
 I. Yurdaisik², H. Cakiroglu³, O. Aras¹; ¹New York, NY/US,
 ²Istanbul/TR, ³Adapazari/TR
- P-89 The effects of different administration regimens of Apatinib in supressing the carcinogenesis of VEGF in rats

 N. Li, H.Y. Huang; Guangzhou/CN
- P-90 Intratumoral treatment of a pituitary adenocarcinoma in a Jack Russell Terrier using radioactive holmium-166 microspheres

 N.C. Morsink¹, N.J.M. Klaassen², B.P. Meij¹, J. Kirpensteijn¹, G.C.M. Grinwis¹, J.W. Hesselink¹, J.F.W. Nijsen², S.A. van Nimwegen¹; 'Utrecht/NL, ²Nijmegen/NL
- P-91 Effect of irreversible electroporation parameters and the presence of a metal stent on the electric field distribution visualized in a static electric field <u>A.M. Hogenes</u>¹, C.G. Overduin¹, C.J.H.M. van Laarhoven¹, C.H. Slump², J.J. Fütterer¹, M.W.J. Stommel¹; 'Nijmegen/NL, ²Enschede/NL



Technical developments

- P-92 Clinical significance and approach of using 3D slicer vessel segmentation and enhancement in Y-90 mapping or TACE pre-treatment planning Z. Badar', S. Nair², K. Ogden'; 'Syracuse, NY/US, 'Hamilton, ON/CA
- P-93 Pulmonary nodule CT-guided microcoil localization: tips and tricks <u>S.R. Alharbi;</u> Riyadh/SA
- P-94 Local thrombolysis for venous port occlusion recovery

 <u>M. Cherkashin</u>, N. Berezina, D. Puchkov, E. Naperov, P. Yablonsky; St. Petersburg/RU
- P-95 Picc-port: a better quality of life

 <u>F. Incandela</u>, I. Di Gesu, C. Genova, D.G. Castiglione,
 M. Midiri, T.V. Bartolotta; Palermo/IT
- P-96 A planning software (pre-alpha-stage) for automated calculation/visualization of optimized overlapping ablation zones (optOAZs) for percutaneous thermal ablation (TA) of large (>40mm) renal tumors <u>C.M. Sommer</u>¹, J. Roeser², F. Pan¹, B. Schmidberger², T.D. Do¹, B.J. Mittmann², P.L. Pereira³, G.M. Richter⁴, H.U. Kauczor¹, A. Franz²; ¹Heidelberg/DE, ²Ulm/DE, ³Heilbronn/DE, ⁴Stuttgart/DE
- P-97 Effectiveness of automated tumor-feeder detection software (ATDS) in super-selective transarterial embolization (TAE)

 <u>T. Kubo</u>, Y. Arai, M. Sone, S. Sugawara, T. Magara;
 Tokyo/JP

- P-98 Technical success and safety profile of balloonoccluded transcatheter arterial chemoembolization (b-TACE) for hepatocellular carcinoma performed with polyethylene-glycol Epirubicin-loaded drug-eluting microsphere P. Lucatelli, G. de Rubeis, L. Ginanni Corradini, B. Rocco, A. Cannavale, P. Nardis, M. Corona, M. Bezzi; Rome/IT
- P-99 Technical efficacy of balloon microcatheter assisted drug-eluting beads trans-arterial chemoembolization for treatment of hepatocellular carcinoma: our preliminary experience

 <u>E. Yong</u>, S.N. Babawale, A. Jhamb; Melbourne, VIC/AU
- P-100 Pre-operative marking guided by image: how I do it <u>R.N. Zangiacomo</u>, D.T. Setuguti, M.R. Liberato, P.C.C. Viana, D.S. Oliveira, L.T.B. Siqueira, M.R. Menezes; São Paulo/BR
- P-101 IR techniques for ischaemic biliary strictures <u>C.L. Bent</u>, J. Phillips, A. Shawyer; Bournemouth/UK
- P-102 The value of a metal artefact reduction algorithm for monitoring and assessing ablation zones during cone-beam CT-guided pulmonary microwave ablation: a quantitative and qualitative analysis <u>M. Ozturk</u>, S. Shafer, E. Meram, C. Brace, P. Laeseke; Madison, WI/US



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Monday, April 8, 2019 13:00 – 13:45; Main Auditorium

Mobile CT intervention suite – clinical application and radiation dose

Matthias May, MD Department of Radiology, Erlangen University Hospital, Germany

First results in liver procedures using the new nexaris Angio-CT

Élia Coimbra, MD Interventional Radiology Unit Hospital Curry Cabral, Lisbon, Portugal

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Satellite Symposia

Monday, April 8

13:00-13:45, Main Auditorium

Siemens

- SY 301 Transforming care delivery through novel concepts in single- and multi-modality solutions
 - 301.1 Mobile CT intervention suite clinical application and radiation dose

 M. May (Erlangen/DE)
 - 301.2 First results in liver procedures using the new nexaris Angio-CT É. Coimbra (Lisbon/PT)



ECIO 2019

BTG AT

MONDAY, APRIL 8

13:45-14:30 | MAIN AUDITORIUM

SYMPOSIUM:

Bringing Curative Intent Strategies with TheraSphere[™] to Europe

Chair: Professor Dr Daniel Seehofer University of Leipzig, Germany

Why I Believe in Curative Intent Strategies with TheraSphere.™ What are the Challenges in Europe?

Professor Dr Daniel Seehofer University of Leipzig, Germany

Moving from Palliation to Curative Intent

Professor Boris Guiu St-Eloi University Hospital, Montpellier, France

Building a Bridge for Stronger Partnerships

Dr Michaël Vouche Hôpital Erasme, Université Libre de Bruxelles, Belgium

Viewing SIRT from a New Perspective

Professor Dr Arndt Vogel Medizinische Hochschule, Hannover, Germany

Panel Discussion & O&A

WEDNESDAY, APRIL 10

10:30-12:00 | HDT Session TA-HDT 5

HANDS-ON WORKSHOP:

Cryoablation and Laser Ablation

Coordinators:

F.M. Gómez Barcelona, Spain; A.H. Mahnken Marburg, Germany

Places are limited to 25 people, allocated on a 'first come, first served' basis

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Monday, April 8

13:45-14:30, Main Auditorium **BTG**

SY 302 Bringing curative intent strategies with Therasphere™ to Europe

Moderator: D. Seehofer (Leipzig/DE)

- 302.1 Why I believe in curative intent strategies with TheraSphere™. What are the challenges in Europe? *D. Seehofer (Leipzig/DE)*
- 302.2 Moving from palliation to curative *B. Guiu (Montpellier/FR)*
- 302.3 Building a bridge for stronger partnerships *M. Vouche (Brussels/BE)*
- 302.4 Viewing SIRT from a new perspective *A. Vogel (Hanover/DE)*

Panel discussion and O&A

18:30-19:15, Auditorium II

Boston Scientific

SY 601 Patient outcomes in oncology and the role of medical device companies

Moderators: T. de Baère (Villejuif/FR), R. Sharma (London/UK)

- 601.1 How can companies positively impact patient care? D. Arnold (Hamburg/DE)
- 601.2 Support of the healthcare ecosystem with device company collaboration A. Gangi (Strasbourg/FR)

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Tuesday, April 9





Terumo

SY 1001 SIRT is back - welcome to QuiremScout

Moderators: D. Arnold (Hamburg/DE), M.G.E.H. Lam (Utrecht/NL)

1001.1 Introduction and objectives D. Arnold (Hamburg/DE)

1001.2 Treating mNET with Holmium SIRT – new hope for patients A.J.A.T. Braat (Utrecht/NL)

1001.3 Interactive tumour board discussion I. Bargellini (Pisa/IT), A.J.A.T. Braat (Utrecht/NL), C. Chiesa (Milan/IT), R.-T. Hoffmann (Dresden/DE)

Questions and answers

Vectorio efficacy & safety for improved cTACE mixing & delivery





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*I For complete information please refer to the local Summary of Product Characteristics ISPC

[**] Indications, volumes and presentations may differ from country to country

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or complete information please refer to country's local Package Information Leaflet & Vectoria® Instruction For Use (IFU).

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For a copy of the SPC/ IFU, please contact a member of Guerbet.

13:45-14:30, Main Auditorium **Guerbet**

SY 1002 HCC treatment, a broader spectrum of opportunities for patients

Moderator: J.-P. Pelage (Caen/FR)

1002.1 Introduction

J.-P. Pelage (Caen/FR)

1002.2 Updated clinical data in cTACE, towards increasing survival

J. Karani (London/UK)

1002.3 cTACE & RFA, an effective therapeutic approach to treat specific patients

A. Denys (Lausanne/CH)

1002.4 Non-target embolisation: an ignored problem? J.-P. Pelage (Caen/FR)

Ouestions and conclusion



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Satellite Symposium in Meeting Room I, Tuesday at 18.30 Hands On Device Training, Wednesday at 10.30

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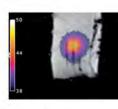
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Tuesday, April 9

18:30-19:45, Meeting Room I (G 110) **CLS**

SY 1301 Modification of laser ablation creates strong immune stimulatory effects

Moderator: A.H. Mahnken (Marburg/DE)

1301.1 Introduction

A.H. Mahnken (Marburg/DE)

1301.2 Abscopal effect – a case report *B. Gonçalves (Porto/PT)*

1301.3 Immune stimulating interstitial laser thermotherapy (imILT) – the scientific background K.-G. Tranberg (Lund/SE)

1301.4 imILT – in immunological context G. Hedlund (Lund/SE)

1301.5 Laser ablation on Locally Advanced Pancreatic Cancer (LAPC) – clinical results, surgeon's view O. Turrini (Marseille/FR)

1301.6 imILT – future aspects *B. Gonçalves (Porto/PT)*

Discussion



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SATELLITE LUNCH SYMPOSIUM

Redefine Interventions with a One Room Angio-CT solution

Wednesday, April 10, 2019 | Room: Main Auditorium, 13.45 - 14.30

Chairman

Prof. B. Guiu

University Hospital Montpellier, France

LECTURE 1

Revisited prostate artery embolization using Infinix-i 4D CT

Speaker:

Dr. G. AmouyalSaint-Louis University Hospital,

Paris, France

LECTURE 2

Alphenix 4D CT: A bright future for multi-modality interventions

Speaker:

Prof. T. de Baere

Gustave Roussy, Villejuif, France

Wednesday, April 10

13:00-13:45, Main Auditorium

Sirtex

SY 1701 Maximising the impact of SIRT with SIR-Spheres Y-90 resin microspheres

Moderator: T.K. Helmberger (Munich/DE)

1701.1 Tips and tricks to handle tricky situations in clinical practice M.C. Burgmans (Leiden/NL)

1701.2 Selecting the right treatment for the patient I. Bargellini (Pisa/IT)

Panel discussion

13:45-14:30, Main Auditorium

Canon

SY 1702 Redefine interventions with a one-room angio-CT solution

Moderator: B. Guiu (Montpellier/FR)

1702.1 Revisited prostate artery embolisation using Infinix 4DCT G. Amouyal (Paris/FR)

1702.2 Alphenix 4DCT: a bright future for multi-modality interventions

T. de Baère (Villejuif/FR)



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Learning Centres

The Learning Centres at ECIO 2019 will provide an excellent opportunity for all congress delegates to test the latest interventional devices, gain hands-on experience with new equipment and talk to industry representatives.

Please note that CIRSE is not responsible for the information provided at the Learning Centres.

Boston Scientific

For information about our Learning Centre activities please visit our booth #22.

Terumo

Terumo Educational Services: For information about our Learning Centre activities please visit booth #13.

Guerbet

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Learn more on cTACE mixture standardisation using Vectorio®

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By Philippe Havard and Amy Wei Innovation Lab Vectorio®

Discover Sequre® Control Reflux microcatheter – How to minimise non-target embolisation

Monday through Thursday

09:30-12:30 13:30-17:30 (except April 11)

By Frederique Delplanque and Eam-Maly Nam Innovation Lab Sequre®

Medtronic

Monday, April 8

10:00-10:45
Microwave ablation liver
M. Meijerink (Amsterdam/NL)

11:00-11:45
Microwave ablation lung
H.H. Torp Mädsen (Aarhus/DK)

14:30-15:30
Optimising bone metastasis local tumour control *R.L. Cazzato (Strasbourg/FR)*

Tuesday, April 9

10:00-10:45 Microwave ablation kidney K.I. Ringe (Hannover/DE)

11:00-11:45 Microwave ablation liver laparoscopic F. De Cobelli (Milan/IT)

Wednesday, April 10

10:00-10:45 Microwave ablation kidney K.I. Ringe (Hannover/DE)

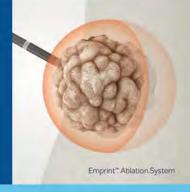
11:00-11:45
Microwave ablation liver
M. Meijerink (Amsterdam/NL)

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April 8-11, 2019



Learning center
Microwave Ablation:
Liver, Lung, Kidney,
Liver laparoscopic

Round table discussions A tumor board discussion



To book your place in one of the Learning Center sessions or in one of the Round Table Discussions Scan QR Code, or visit: www.eventbrite.co.uk/e/ecio-2019-learningcenter-and-round-table-discussions-bymedtronic-tickets-55689960170

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The Safe Sedation Training sessions are kindly supported by Medtronic and organised in cooperation with the AQAI Simulation Center.

For detailed information on Hands-on Device Training and the Safe Sedation Training, please refer to pages 14-17.

If you are interested in obtaining product information outside of the Hands-on Training sessions, please visit the respective company booth in the exhibition area.

For further information about the industry partners, please refer to the Technical Exhibitors Guide (pages 84-120).

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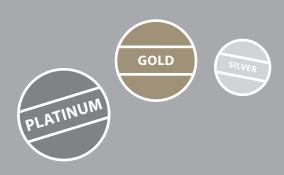
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AprioMed	32
Boston Scientific International	22
Bracco Imaging	15
BTG	23
Canon Medical Systems Europe	25
Canyon Medical	10
CAScination	2
Clinical Laserthermia Systems	11
Cook Medical Europe	18
ECO Microwave	17
Encapson	29
Endocare	16
Guerbet	24
H.S. Hospital Service	3
IceCure Medical	7
IGEA Clinical Biophysics	19
Imactis	31
Interventional News	18b
medac GmbH	34
Medtronic	14
Merit Medical Austria	1
MIM Software	6
NeuWave Medical	26
PharmaCept	4
Philips Medical Systems	28
RF Medical	5
Siemens Healthcare	12
SIO (Society of Interventional Oncology)	18a
Sirtex Medical Europe	21
Soteria Medical	33
STARmed	9
Surgnova Healthcare Technologies	8
Terumo Europe	13
Varian Medical	30

Official Name

Booth #

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MIM Software	6
IceCure Medical	7
Surgnova Healthcare Technologies	8
STARmed	9
Canyon Medical	10
Clinical Laserthermia Systems	11
Siemens Healthcare	12
Terumo Europe	13
Medtronic	14
Bracco Imaging	15
Endocare	16
ECO Microwave	17
Cook Medical Europe	18
SIO (Society of Interventional Oncology)	18a
Interventional News	18b
IGEA Clinical Biophysics	19
AngioDynamics	20
Sirtex Medical Europe	21
Boston Scientific International	22
BTG	23
Guerbet	24
Canon Medical Systems Europe	25
NeuWave Medical	26
Philips Medical Systems	28
Encapson	29
Varian Medical	30
Imactis	31
AprioMed	32
Soteria Medical	33
medac GmbH	34

Technical Exhibitors Guide

AngioDynamics, Inc.

20

Phone: + 31 207 532 949

Email: customer service @angiodynamics.com

www.AngioDynamics.com

AngioDynamics Inc. is a leading provider of innovative, minimally invasive medical devices used by professional healthcare providers for vascular access, surgery, peripheral vascular disease and oncology. AngioDynamics' diverse product lines include market-leading ablation systems, fluid management systems, vascular access products, angiographic products and accessories, angioplasty products, drainage products, thrombolytic products and venous products. Stop by AngioDynamics booth to find out more about our NanoKnife, Irreversible Electroporation (IRE), Solero Microwave Tissue Ablation (MTA) and BioSentry tract sealant Systems.

AprioMed AB

32

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AprioMed develops, manufactures, markets and sells innovative medical devices and related services within the field of interventional radiology. We aim to deliver, in close collaboration with healthcare practitioners, innovative quality tools to achieve the most favourable solutions for radiologists worldwide.

22

Boston Scientific International SA



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Bracco Imaging Spa

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Bracco Imaging S.p.A., part of the Bracco Group, is one of the world's leading companies in the diagnostic imaging business. Headquartered in Milan, Italy, Bracco Imaging develops, manufactures and markets diagnostic imaging agents and solutions that meet medical needs. Bracco Imaging offers a product and solution portfolio for all key diagnostic imaging modalities: X-ray Imaging (including Computed Tomography-CT, Interventional Radiology, and Cardiac Catheterization), Magnetic Resonance Imaging (MRI), Contrast Enhanced Ultrasound (CEUS) and Nuclear Medicine through radioactive tracers. The diagnostic imaging portfolio is completed by several medical devices and advanced administration systems for contrast imaging products in the fields of radiology. The Company operates in over 100 markets worldwide, either directly or indirectly, through subsidiaries, joint ventures, licenses and distribution partnership agreements. To learn more about Bracco Imaging, visit www.braccoimaging.com

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23



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https://eu.medical.canon/

Canon Medical Systems Europe B.V.





25



Canon Medical offers a full range of diagnostic medical imaging solutions including CT, X-Ray, Ultrasound and MRI, across the globe. As of December 2016, Canon Medical became a member of the Canon Group. In line with our continued Made For life philosophy, patients are at the heart of everything we do. Our mission is to provide medical professionals with solutions that support their efforts in contributing to the health and wellbeing of patients worldwide. Our goal is to deliver optimum health opportunities for patients through uncompromised performance, comfort and safety features.

At Canon Medical we work hand in hand with our partners – our medical, academic and research community. We build relationships based on transparency, trust and respect. Together as one, we strive to create industry-leading solutions that deliver an enriched quality of life.



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Phone: +86 255 885 0594

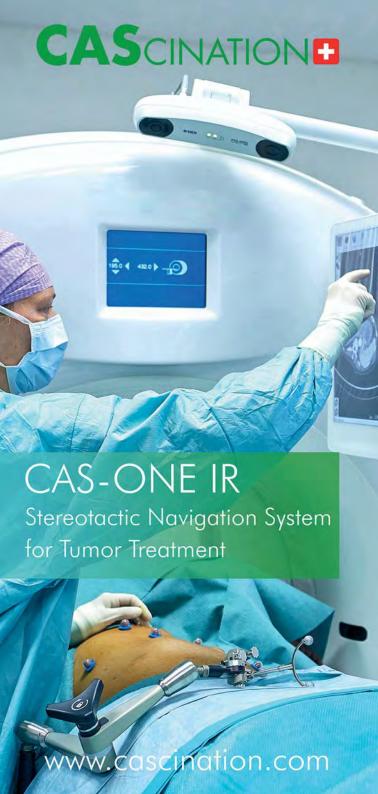
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10

Canyon Medical is specialized in Microwave Ablation for over 30 years with more than 100,000 accumulated cases done successfully with our system in China. By innovating with clinical practices hands in hands, we are pioneering to solve clinical challenges in this field. In view of our continuous and prominent contribution, our company was granted with many great honors, like the National Award for Scientific and Technological Invention in 2014. In 2015, Canyon Medical joined the family of Micro-Tech. In virtue of Micro-Tech's international platform and management philosophy, Canyon Medical is advancing towards a greater international stage at a higher level. As a leading brand in China with endless efforts in product design and R&D, we are proud to announce a new generation Microwave ablation device here.



CAScination AG

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2

From research to worldwide success – CAScination is dedicated to the development, manufacture and commercialization of innovations in computer-assisted and image-guided interventional radiology and surgery. Our trailblazing navigation systems and surgical robots are designed to improve outcomes for those undergoing surgical or interventional procedures and offer new perspectives to patients worldwide. Our CAS-One planning and navigation system is used to treat patients suffering from soft tissue cancer (e.g., liver cancer). We aim to provide physicians with the tools needed to ensure precise, reproducible and efficient therapy, and give more patients access to minimally invasive and effective treatments, helping them to recover fast and get back to enjoying life. Our CAS-One planning and navigation system is CE marked and FDA cleared, and is used in many hospitals across the world. Our portfolio of products and solutions includes navigation systems for open and minimally invasive cancer treatment as well as an otological planning software OTOPLAN. CAScination is committed to continuously expanding the indications of precision navigation for the benefit of patients worldwide.

Clinical Laserthermia Systems AB



11

(publ) (CLSB Nasdaq First North) Medicon Village Scheelevägen 2 223 81 Lund Sweden

Phone: +46 461 521 00 Email: info@clinicallaser.se

www.clinicallaser.se

CEO: Lars-Erik Eriksson, lee@clinicallaser.se

Clinical Laserthermia Systems (CLS) develops and sells the TRANBERG® | Thermal Therapy System for safe, gentle and effective treatment of cancerous tumors. The system is marketed for image-guided laser ablation and for treatment with CLS' proprietary Immuno-stimulating Interstitial Laser Thermotherapy, imILT®. The TRANBERG®system can be configured for MR or CT/US-guided procedures with monitoring and feedback of tissue temperature for exact therapy and ablation control. It consists of a mobile laser unit. non-cooled laser applicators, external tissue temperature sensors and procedure-specific accessories. In collaboration with Image Guided Therapy, MRI Interventions and Siemens Healthineers, CLS is currently developing a software platform for navigation and temperature control during MR guided treatment with the TRANBERG system. The launch of the first product is scheduled to second half of 2019 and will provide clinicians a complete package for an optimized workflow during treatment. Clinical studies regarding imILT treatment of breast cancer and pancreatic cancer have been carried out 2016-2018 under the EU Horizon2020-program. The treatment was well-tolerated by the patients, and usability and safety of the equipment was excellent. A clinical study of image-guided ablation treatment of prostate cancer is currently taking place in Toronto, Canada. Read more at www.clinicallaser.com

Cook Medical

18

EMEA Support Centre O'Halloran Road National Technology Park Limerick Ireland

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Eco Microwave

17

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Since 2000, ECO Medical has been a medical device manufacturer specialized in microwave ablation, high frequency, and physical therapy products. The objective is to provide safer and more accurate minimally invasive treatment for patients. Please visit www.ecomicrowave.com for more information.

Encapson

29

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Encapson is a medical technology company with the mission to improve patient care through innovative echogenic visibility solutions for medical devices. Sono-Coat™ is a best in class coating-based visibility system that significantly improves the ultrasound visibility of medical devices in the body leading to better patient outcomes. The unmatched ultrasound visibility of Sono-Coat™ enables doctors carrying out difficult minimally invasive procedures. Sono-Coat™ is a game-changing technology in situations "when precision counts". It enables precise targeting of objects in deeper tissue structures (e.g. liver and kidney biopsies) and supports the physician in performing accurate, safe and error-free ultrasound-guided minimally invasive procedures.

Endocare, Inc.

16

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Endocare, Inc. is a medical device company focused on the development of minimally invasive tumor ablation technologies including percutaneous cryoablation and microwave ablation. With over 15 years of clinical experience in percutaneous ablation of kidney, lung, painful metastases to bone, nerve pain, and other tissues, we remain committed to innovative technology that improves and extends patients' lives.



24

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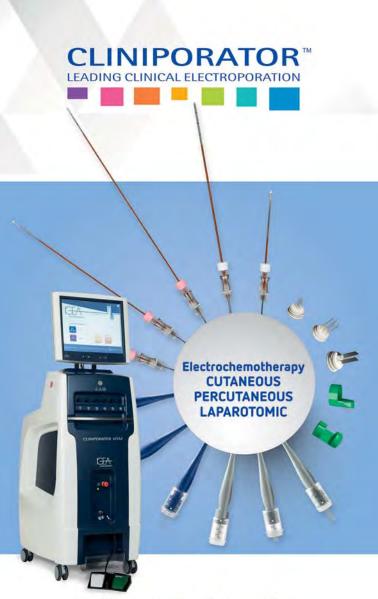
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3

HS Hospital Service Spa is a leading player in the international interventional oncology market, from RF and MW tumor ablation systems to soft tissue and bone marrow biopsy needles, catheters, drug infusion devices and all sorts of products for surgery, interventional radiology and critical care. In the field of health technologies, success may only be achieved through excellence. We are committed to delivering excellence all the way from product design and manufacturing to post-sale customer care. We transfer know how and expertise from industrial research to the clinical field and back. Every day we work side by side with physicians and interact with all the stakeholders in interventional oncology for better understanding and fulfilling their needs and requirements, so to deliver to the market top level devices, with optimum performance, minimum invasiveness and unmatched usability. Let us show you our new products and projects and let us share with you information, ideas, plans and strategies for the future! Please come and visit us at booth number 31



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19

IGEA works to improve patient's Quality of Life developing and producing, from own original projects, innovative, effective and safe therapeutic systems for clinical practice. IGEA develops biophysical treatments in two main areas: Orthopedics: to improve bone healing and joint preservation. Oncology: to treat cancer. The Cliniporator® and the Cliniporator® VITAE are the most advanced electroporation technologies for the treatment of tumor nodules located to the skin, subcutaneous tissue, parenchyma and bone.

IceCure Medical Ltd.

7

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IceCure Medical – Innovating Cryotherapy Solutions. Setting new standards in minimally-invasive tumor therapy IceCure Medical is a medical device company setting new standards in minimally-invasive tumor therapy for women's health and interventional oncology. Founded in 2006 to advance the treatment of cancerous tumors, IceCure's core technology is based on cryoablation, using freezing temperature (liquid nitrogen) to effectively destroy tumors safely, quickly, and painlessly, without the need for surgery. Proprietary liquid nitrogen technology for maximum efficiacy Based on liquid nitrogen, IceCure's proprietary third-generation technology generates lower tissue temperatures and a faster cooling rate than other methods, to enable a larger ice-ball tumor killing area for maximum efficacy. Enabling in-office treatment options - Commercially available in the U.S.A., Europe, Hong-Kong, Thailand, Singapore and South-Central America, its flagship system, ProSense™, uses ultrasound imaging to guide a small probe (thin hollow needle) into the tumor. The easy-to-use ProSense™ cryoablation procedure enables full physician control and can be performed in less than 30 minutes in the comfort of a doctor's office. As a proven solution for the treatment of fibroadenomas (benign breast tumors), the ProSenseTM system is also indicated for use in the fields of general surgery, oncology, gynecology and urology.

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Imactis is specialized in computer assisted interventional radiology. Imactis develops and markets innovative solutions to assist interventional radiologists during minimally invasive needle procedures (biopsies, tumor ablations, vertebroplasties, infiltrations, drainages...). The objective is to increase accuracy and safety, facilitate complex procedures, reduce the length of procedures, decrease the number of

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Medtronic

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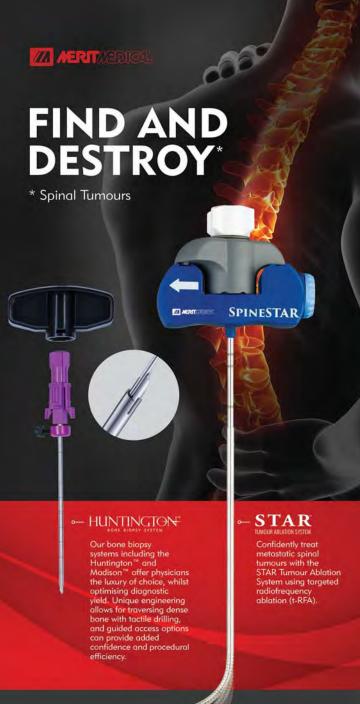
Contact: Francesca Zucchetti Mobile: +39 335 780 722 2

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Making healthcare better is our priority, and we believe medical technology can play an even greater role in improving people's lives. With challenges facing families and healthcare systems – such as rising costs, aging populations, and the burden of chronic disease – we are using the power of technology to take healthcare Further, Together. Innovation and collaboration are central to who we are. Since the late 1940s, we have been working with others to alleviate pain, restore health, and extend life. Today, we are a medical technology leader, employing more than 84,000 people worldwide, and offering therapies and solutions that enable greater efficiency, access, and value – for healthcare systems, providers, and the people they serve. Learn more at Medtronic.com.



Merit Medical

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1

Founded in 1987, Merit Medical Systems, Inc. is a worldwide company engaged in the development, manufacture and distribution of proprietary disposable medical devices used in interventional and diagnostic procedures, particularly in cardiology, radiology, embolic therapy and endoscopy. We have built a comprehensive embolotherapy suite of products, including tools to deliver your embolics right to the target. HepaSphere™ Microspheres deliver excellent objective response rates for embolisation of hepatocellular carcinoma and metastases to the liver; SwiftNINJA® is a straight tip catheter that articulates up to 180 degrees in opposing directions to rapidly select the most challenging vascular ostium: True Form[™] is a 0.014" reshapable guide wire that can be shaped multiple times and maintain its shape during procedures. Our focus on interventional spine continues to increase, with tools to treat metastatic spinal tumors as well as vertebral compression fractures. We also offer devices and kits for soft tissue, bone and muscle biopsy, for everyday procedures and more challenging needs. These coaxial systems feature unique hard bone access and guide wire technologies, and all include a clockwise-cutting trephine bone biopsy needle to optimise diagnostic vield. Our team will be delighted to see you at our booth and present our product portfolio.

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MIM Software Inc.

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NeuWave Medical, Inc.



26

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European School of Interventional Radiology

Clinical Procedure Training

ESIR stays abreast of new developments in IR with this hand-picked selection of hot topics and access to state-of-the-art technology. Taught by distinguished faculty members, these specially designed sessions are aimed at experienced interventional radiologists who are already familiar with the topic's theoretical aspects and the relevant literature. Alongside "tips and tricks", this year's programme will put an emphasis on modern procedural training and practical exercises, with live or recorded cases being used where appropriate.



DEB & cTACE in Primary and Secondary Liver Cancer Munich (DE), June 6-7, 2019

Local Host: T.F. Jakobs Hospital Barmherzige Brueder Munich



Reliability in Percutaneous Tumour Ablation Innsbruck (AT), Dec. 12-13, 2019

Local Hosts: R. Bale & W. Jaschke LKH – Universitätskliniken Innsbruck

For more information, please visit www.cirse.org/esir



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4

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5



12

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Society of Interventional Oncology

18a

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Established by WCIO, the Society of Interventional Oncology (SIO) serves as the only membership-based organization dedicated to the emerging field of Interventional Oncology. SIO works to further promote the mission to advance Interventional Oncology (IO) as the fourth pillar of cancer therapy alongside medical, surgical, and radiation oncology worldwide. Members receive discounted registration to SIO's Annual Scientific Meeting and opportunities to apply for exclusive research grants and earn free CME online at IO University. Become a member today and join us at SIO 2019 taking place in Boston, MA from June 8-11, 2019. Visit www.sio-central.org for the latest news and society updates.



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Soteria Medical BV & Biolitec biomedical technology GmbH. Soteria, a company located in Arnhem, The Netherlands, has developed a new approach to performing MRI guided prostate interventions by utilizing a fully MR-compatible robotic device for real time positioning in the MR scanner. Soteria's scope is the development, production and sales of medical devices and instruments – specifically in the field of MRI guided interventions. The initial product is the RCM (Remote Controlled Manipulator) for MRI guided prostate interventions. The RCM provides the ability to perform MRI guided biopsies within 30 minutes. Utilizing the patented pneumatic motors, the system allows for a large target range as well as the high accuracy to target for the smallest lesions visible on MR images. The RCM can also be used to support focal therapies such as Focal Laser Ablations (FLA). Biolitec is a German laser & fibre company presenting the biolitec Leonardo diode Dual laser and the specially designed LITT 2&3B FLA fibres for FLA of prostate tumor.

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Surgnova Healthcare Technologies

8

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Terumo Interventional Systems

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13



Tokyo-based Terumo Corporation is one of the world's leading medical device manufacturers with over \$5 billion in sales and operations in more than 160 nations. Founded in 1921, the company develops, manufactures and distributes world-class medical devices including products for use in cardiothoracic surgery, interventional procedures and transfusion medicine; the company also manufactures products for hospital and physician office use. Terumo contributes to society by providing valued products and services to the health care market and by responding to the needs of health care providers and the people they serve. Terumo develops products for interventional radiologists that specialize in treating patients with oncological indications. Rising to the challenge of creating innovative treatments for patients, we bring you a complete range of interventional oncology products that focus on: Access, Locoregional treatments ranging from ablation, TACE and SIRT, Endovascular embolization. As a pioneer in interventional oncology, Terumo is committed to bringing you cutting-edge technology to support your loco regional patient needs. We are committed to supporting our comprehensive product portfolio by a well-trained field force and solid clinical evidence.

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30

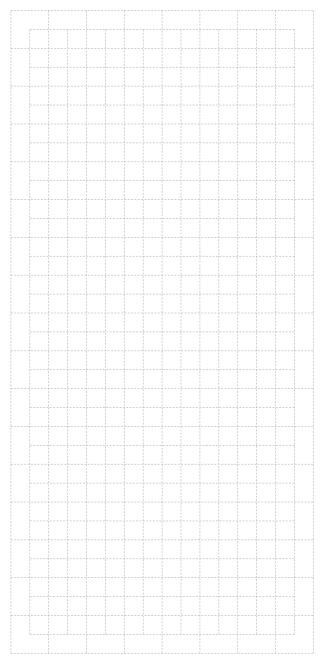
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Varian focuses energy on saving lives by equipping the world with advanced technology for fighting cancer. The company is the world's leading manufacturer of medical devices and software for treating cancer and other medical conditions with radiotherapy, radiosurgery, proton therapy and brachytherapy. The company supplies informatics software for managing comprehensive cancer clinics, radiotherapy centers and medical oncology practices. Varian employs approximately 7,000 people at sites around the world. For more information, visit www.varian.com and follow @VarianMedSys on Twitter.

Notes 121



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The ECIO 2019 Pocket Guide

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