

WCB 
2021

SCIENTIFIC PROGRAMME

6-8 May 2021
ONLINE CONGRESS

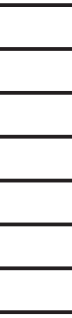
World Congress of Brachytherapy

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ESTRO
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Thursday
6 May 2021



Opening session - LIVE

Thursday, 6 May 2021 08:15 - 08:55

- 08:15 **Welcome and introduction** SP - 0001
B. Pieters (The Netherlands)

Teaching lecture: Transrectal ultrasound for gynaecological cancer brachytherapy

Thursday, 6 May 2021 08:15 - 08:55

- 08:15 **Transrectal ultrasound for gynaecological cancer brachytherapy** SP - 0002
M. Schmid (Austria)

Symposium: Image guided BT and Outcome for Cervical Cancer: Update from different regions

Thursday, 6 May 2021 09:00 - 10:15

- 09:00 **EMBRACE experience** SP - 0003
I. Schulz-Jurgenliemk (The Netherlands)
- 09:18 **Image guided Brachytherapy and Outcomes of Cervical Cancer:: Indian Experience** SP - 0004
L. Gurram (India)
- 09:36 **Cervical Cancer Brachytherapy at Washington University: 1920-2020** SP - 0005
P. Grigsby (USA)
- 09:54 **Transition from 2D to MRI-based adaptive brachytherapy, Chulalongkorn University experience** SP - 0006
N. Amornwichee (Thailand)

Symposium: Brachytherapy physics 2030 – Dosimetry for nuclides and radiation

Thursday, 6 May 2021 09:00 - 10:15

- 09:00 **Nuclides and dose delivery devices – An overview and Comparison** SP - 0007
J. Perez Calatayud (Spain)

09:18	Traceability of LDR and HDR source calibration. <u>T.Schneider (Germany)</u>	SP - 0008
09:36	Calibration at the clinical level for HDR and LDR brachytherapy sources <u>M. Rivard (USA)</u>	SP - 0009
09:54	Dosimetry beyond TG43 - Radiobiological models combined with model based and deep convolutional neural network algorithms <u>S. Enger (Sweden)</u>	SP - 0010

Proffered papers: Proffered papers: Breast and cervix

Thursday, 6 May 2021 10:45 - 11:45

10:45	Automated multi-criteria treatment planning for adaptive HDR-BT for locally advanced cervical cancer <u>M. Oud (The Netherlands)</u> , I. Kolkman-Deurloo, J. Mens, D. Lathouwers, Z. Perkó, B. Heijmen, S. Breedveld	OC - 0011
10:55	Reading Between the Voxels: Radiomic Predictors of Progression-Free Survival in Cervical Cancer <u>R. Zeitlin (USA)</u> , H. Saeed, D. Schott, Y. Zhang, P. Prior, J. Rownd, A. Li, B. Erickson, M. Bedi	OC - 0012
11:05	Declining brachytherapy utilization for cervical cancer patients - have we reversed the trend? <u>M.D. Schad (USA)</u> , A.K. Patel, S.M. Glaser, G.K. Balasubramani, T.N. Showalter, S. Beriwal, J.A. Vargo	OC - 0013
11:15	APBI versus very APBI in the elderly: a comparison analysis of oncological outcome and late toxicity <u>J. Hannoun-Levi (France)</u> , D. Lam Cham Kee, J. Gal, R. Schiappa, M. Gautier, M. Chand	OC - 0014
11:25	Dosimetric evaluation of OAR in APBI patients treated with multicatheter interstitial brachytherapy <u>M. Macaes (Portugal)</u> , S. Pinto, A. Pereira, J. Lencart, P. Fernandes, L. Trigo	OC - 0015
10:35	High dose rate brachytherapy versus electron boost for tumor bed after breast conserving therapy <u>J. Bryantseva (Russian Federation)</u> , S. Novikov, I. Akulova, J. Melnik, S. Kanaev	OC - 0016

Proffered papers: Proffered papers: Buccal mucosa and Skin

Thursday, 6 May 2021 10:45 - 11:45

- 10:45 **Long term outcomes of Carcinoma Buccal Mucosa treated with High Dose Rate Interstitial Brachytherapy** OC - 0017
H.K. Bajwa (India), R. Singareddy, K.R. Alluri
- 10:55 **HDR 192-Ir surface brachytherapy in the treatment of basal cell skin cancer in elderly patients** OC - 0018
M. Stankiewicz (Poland), P. Wojcieszek
- 11:05 **Superficial HDR brachytherapy for skin lesions involving the finger – The Christie experience** OC - 0019
A. Rembielak (United Kingdom), J. Bedford, S. Wilson
- 11:15 **Freiburg Flap Surface Applicator Brachytherapy positional accuracy on MR-only PETRA images** OC - 0020
E. Kaza (USA), C.Y. Lee, R.A. Cormack, P.M. Devlin, I. Buzurovic
- 10:25 **End-to-end verification of 3D printed applicators for HDR skin brachytherapy** OC - 0021
B. Dewit (Belgium), M. De Brabandere, A. Nulens, M. Christiaens, W. Crijns, T. Depuydt
- 11:35 **MRI-guided Treatment Planning for Skin Brachytherapy with PETRA** OC - 0022
C.Y. Lee (USA), E. Kaza, P.M. Devlin, R.A. Cormack, I. Buzurovic

Proffered papers: 3 Best Moderated Abstracts

Thursday, 6 May 2021 11:45 - 12:45

- 11:45 **IMRT or Brachytherapy boost in oropharyngeal malignancies: A Randomized, open label study** OC - 0023
V. Pareek (India), R. Bhalavat, M. Chandra, L. Nellore, K. George, D. Borade
- 12:00 Discussant: C. Chargari (France) 0024
- 12:05 **Tumor regression of cervical cancer during chemoradiation evaluated by the T-score in EMBRACE I** OC - 0025
J.C. Lindegaard (Denmark), P. Petric, M.P. Schmid, C. Haie-Meder, L.U. Fokdal, A. Sturdza, P. Hoskin, U. Mahantshetty, B. Segedin, K. Bruheim, F. Huang, B. Rai, R. Cooper, E. van der Steen-Banasik, E. Van Limbergen, B.R. Pieters, L.T. Tan, R. Nout, A. de Leeuw, N. Nesvacil, K. Kirchheiner, I. Jürgenliemk-Schultz, K. Tanderup, C. Kirisits, R. Pötter, E. Collaborative Group
- 12:40 Discussant: S. Beriwal (USA) 0028

12:25 **Intensity modulated HDR ocular brachytherapy using Yb-169 and Se-75** OC - 0027
J. Dupere (USA), J.J. Munro III, D.C. Medich

12:20 Discussant: L.Beaulieu (Canada) 0026

Debate: This house believes that combination therapy for intermediate and high-risk prostate cancer represents best standard of care -LIVE

Thursday, 6 May 2021 14:15 - 15:30

Chairs: Y.Yoshioka (JP) and P.Hoskin (UK)

14:15 **For the motion** SP - 0029
M. Keyes (Canada)

14:30 **Against the motion: Data, data, data** SP - 0030
D. Spratt (USA)

14:45 **For the motion rebuttal** SP - 0031
A. Gomez Iturriaga (Spain)

15:00 **Against the motion rebuttal: Brachytherapy Boost for Prostate Cancer - A Diminishing Solution** SP - 0032
J. Martin (Australia)

15:15 **Discussion** 0033

Symposium: Eye/orbital brachytherapy: from organ sparing to function sparing

Thursday, 6 May 2021 14:15 - 15:30

14:15 **Choice of the best approach for eye melanoma** SP - 0034
TBC

14:40 **The role of interstitial radiotherapy in orbital tumors or extrascleral uveal melanoma** SP - 0035
G. Kovács (Italy)

15:05 **Brachytherapy toxicity: diagnosis, therapies and preventive strategies** SP - 0036
M.A.. Blasi (Italy)

Proffered papers: Proffered papers: Prostate Outcome and Treatment Plans

Thursday, 6 May 2021 16:00 - 17:00

- 16:00 **Updated results of focal salvage high-dose-rate brachytherapy for radiorecurrent prostate cancer.** OC - 0037
M. Peters (The Netherlands), M. van Son, M. Moerland, J. Lagendijk, W. Eppinga, T. Shah, H. Ahmed, J. van der Voort van Zyp
- 16:10 **Outcomes in focal vs. dose-painted salvage HDR brachytherapy for locally recurrent prostate cancer** OC - 0038
I. Navarro (Canada), L. Joseph, Z. Liu, D. Tausky, G. Delouya, M. Barkati, M. Beauchemin, T. Niazi, A. Berlin, J. Helou, S. Raman, D. Beliveau-Nadeau, S. Kadoury, A. Rink, P. Chung, C. Ménard
- 16:20 **Predicting biochemical failure after MR-guided focal HDR brachytherapy for recurrent prostate cancer** OC - 0039
T. Willigenburg (The Netherlands), M. van Son, S. van de Pol, W. Eppinga, J. Lagendijk, M. Moerland, H. de Boer, J. van der Voort van Zyp, M. Peters
- 16:30 **Ultrafractionated radiotherapy(RT) in localised prostate cancer:HDR brachytherapy vs stereotactic RT** OC - 0040
Y.M. Tsang (United Kingdom), H. Tharmalingam, K. Belessiotis-Richards, S. Armstrong, P. Ostler, R. Hughes, R. Alonzi, P. Hoskin
- 16:40 **Dosimetric comparison of SBRT and HDR brachytherapy in patients from randomized study.** OC - 0041
S. Nonikov (Russia), N. Ilin, Y. Melnik, R. Novikov, Y. Merezko, S. Kanaev
- 16:50 **Applying column generation to the intensity-modulated high-dose-rate brachytherapy inverse planning** OC - 0042
M. Antaki (Canada), M. Renaud, J. Seuntjens, S. A. Enger

Proffered papers: Proffered papers: Optimising treatment

Thursday, 6 May 2021 16:00 - 17:00

- 16:00 **Feasibility Study of Quantitative Silicone Oxygen Sensors in HDR Cervical Cancer Brachytherapy** OC - 0043
R. Cormack (USA), J. Tokuda, G. Ekchian, M. Cima, L. Lee
- 16:10 **Clinical evaluation of an interactive multi-criteria optimisation workflow for HDR brachytherapy** OC - 0044
C. Bélanger (Canada), É. Poulin, S. Aubin, W. Foster, A. Martin, É. Vigneault, J.A.M. Cunha, L. Beaulieu

- 16:20 **Extracting anatomical information from Iridium-192 gamma images using artificial intelligence** OC - 0045
T. van Wagenberg (The Netherlands), G. Paiva Fonseca, F. Verhaegen, A.S. Duque, G. Landry
- 16:30 **Robust optimization to mitigate rotational uncertainty effects in intensity modulated brachytherapy** OC - 0046
B. Morén (Sweden), Å. Carlsson Tedgren, T. Larsson, S.A. Enger, G. Famulari, M. Morcos, M. Antaki
- 16:40 **Multi-criteria optimization integrating catheter optimization for prostate HDR brachytherapy** OC - 0047
P. Chatigny (Canada), C. Bélanger, É. Poulin, L. Beaulieu
- 16:50 **Correlation between radiation-induced foci from 192Ir brachytherapy and tumor nuclei Size** OC - 0048
B. Behmand (Canada), M. Evans, Y. Kamio, S. Abbasinejad Enger

Friday
7 May 2021



Teaching lecture: Using health economics to make the case for brachytherapy – HALYS, QALYS and DALYS

Friday, 7 May 2021 08:00 - 08:40

08:00 **Using health economics to make the case for brachytherapy – HALYS, QALYS and DALYS** SP - 0049

M.. Milosevic and D. Rodin (Canada)

Symposium: Single dose vs fractionated HDR monotherapy for prostate cancer

Friday, 7 May 2021 08:45 - 10:00

08:45 **Single dose HDR brachytherapy is safe for low-risk prostate cancer** SP - 0050

P. Hoskin (UK)

09:03 **Single dose HDR prostate brachytherapy and residual disease** SP - 0051

G.. Morton (Canada)

09:21 **HDR prostate brachytherapy and fractionation; does it matter?** SP - 0052

J. Millar (Australia)

09:39 **LDR prostate brachytherapy is safe and effective for all localized prostate cancer risk groups** SP - 0053

B.. Davis (USA)

Symposium: Brachytherapy physics 2030 – Enhanced application and in-vivo treatment verification

Friday, 7 May 2021 08:45 - 10:00

08:45 **Increasing the degrees of freedom with applicators** SP - 0054

A. Damato (USA)

09:03 **Update by the ESTRO task group on in vivo dosimetry in brachytherapy** SP - 0055

J. Johansen (Denmark)

09:21 **In vivo HDR brachytherapy source tracking with point dosimeters: current status and future directions** SP - 0056

J. Poder (Australia), D. Cutajar, A. Howie, M. Petasecca, M. Lerch, J. Bucci, A. Rosenfeld

09:39 **In vivo source tracking with imaging panels and fluoroscopy** SP - 0057

P. Paiva Fonseca (The Netherlands)

Proffered papers: Proffered papers: Treatment outcomes cervix

Friday, 7 May 2021 10:30 - 11:30

- 10:30 **Does dose to the ureter predict for ureteral stenosis? - Analysis of 3D MRI-based brachytherapy** OC - 0058
J. Rodríguez-López (USA), D. Ling, A. Keller, H. Kim, A. Mojica-Márquez, S. Glaser, S. Beriwal
- 10:40 **Clinical characteristics and risk factors for local failure in cervix cancer patients after MR IGABT** OC - 0059
M. Schmid (Austria), U. Mahantshetty, C. Kirisits, K. Tanderup, C. Haie-Meder, L. Fokdal, A. Sturdza, P. Hoskin, B. Segedin, K. Bruheim, F. Huang, B. Rai, R. Cooper, E. van der Steen-Banasik, E. Van Limbergen, B. Pieters, L.T. Tan, R. Hawaldar, S. Kannan, R. Nout, A. de Leeuw, N. Nesvacil, I. Jürgenliemk-Schulz, J. Lindegaard, R. Pötter
- 10:50 **Prediction of treatment response in patients with cervical cancer using midtreatment PET/MRI** OC - 0060
R. Voitišek (Czech Republic), J. Baxa, P. Kovářová, A. Almortaza, P. Hošek, E. Sukovská, R. Tupý, J. Ferda, J. Fínek
- 11:00 **Phase III randomized trial of trans-abdominal ultrasound in intra-cavitary brachytherapy in Cervix** OC - 0061
M. Barthwal (India), V. Pareek, P. Giridhar, S. Mallick
- 11:10 **Comparision of two HDR intracavitary brachytherapy regimens in treatment of cervical cancer** OC - 0062
A. Krishna (India), H. AG, D. Fernandes, A. MS, S. Rao, S. Shankar
- 11:20 **Peritoneal spacing reduce OAR dose in cervical cancer BT. Preliminary results of a pilot study** OC - 0063
M. Federico (Spain), M.D. Rey-Baltar Oramas, A. Tornero

Proffered papers: Proffered papers: Treatment verification

Friday, 7 May 2021 10:30 - 11:30

- 10:30 **First clinical results of integrated EM tracking for pre-treatment verification in prostate BT** OC - 0064
I. Kolkman-Deurloo (The Netherlands), L. Heerden van, R. Paassen van, J. Schiphof-Godart, M. Christianen, J. Mens, M. Franckena, M. Maenhout, R. Rijnisdorp, L. Luthart, M. Hoogeman
- 10:40 **Real-time electromagnetic guidance for GYN interstitial HDR brachytherapy: a proof-of-concept** OC - 0065
A. Cantin (Canada), M. Lavallée, É. Poulin, W. Foster, L. Beaulieu

- 10:50 **A multi-sensor-based dosimetry platform for real time source tracking in HDR brachytherapy** OC - 0066
H.M. Linares Rosales (Cuba), J. Johansen, G. Kertzscher, K. Tanderup, L. Beaulieu, S. Beddar
- 11:00 **Establishing a Fingerprinting Method for Fast Catheter Identification in HDR Brachytherapy** OC - 0067
D. Tho (Canada), E. B. Jørgensen, H. M H Linares , C. Belanger, L. Beaulieu, J. G Johansen, G. Kertzscher
- 11:10 **Accuracy of a source-tracking method based on in vivo dosimetry for HDR prostate brachytherapy** OC - 0068
E. Jørgensen (Denmark), G. Kertzscher, S. Buus, L. Bentzen, S.B. Hokland, S. Rylander, K. Tanderup, J.G. Johansen
- 11:20 **Demonstration of 3D source tracking HDR brachytherapy treatment verification in a phantom** OC - 0069
M. Hanlon (Australia), R. Smith, V. Panettieri, J. Millar, R. Franich

Plenary session: The next generation of brachytherapists

Friday, 7 May 2021 11:40 - 12:00

- 11:40 **The next generation brachytherapists** SP - 0070
D. Petereit (USA)

Award lecture: Marie Curie Medal

Friday, 7 May 2021 12:05 - 12:40

- 12:05 Introduction by F.Vicini (USA) 0071
- 12:10 **Will Brachytherapy Survive the Radical Changes Facing Medicine?** SP - 0072
A. Martinez (USA)

Discussion forum: Eye/orbital brachytherapy: from organ sparing to function sparing - LIVE

Friday, 7 May 2021 13:45 - 14:15

Chairs: L Tagliaferri (Germany) and A. Chicel (USA)
 Discussants: TBC G. Kovács (Italy) and M.A. Blasi (Italy)

Discussion forum: Brachytherapy physics 2030 – Enhanced application and in-vivo treatment verification- LIVE

Friday, 7 May 2021 13:45 - 14:15

Chairs: K. Tanderup (Denmark) and K.Martell (Canada)
 Discussants: A. Damato (USA), J.Johansen (Denmark), J.Poder (Australia) and G. Paiva Fonseca (The Netherlands)

Symposium: 21st century brachytherapy: is it available, affordable and relevant?

Friday, 7 May 2021 14:15 - 15:30

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|-------|---|-----------|
| 14:15 | Advocating global availability of cervical cancer brachytherapy | SP - 0073 |
| | <u>S. Chopra (India)</u> | |
| 14:33 | Brachytherapy Disparity and Challenges of Reimbursement in the United States | SP - 0074 |
| | <u>P. Orio (USA)</u> | |
| 14:51 | Utilizing time activity based costing to determine the real costs of brachytherapy | SP - 0075 |
| | <u>M. Kamrava (USA)</u> | |
| 15:09 | Motivating the next generation of brachytherapy trainees | SP - 0076 |
| | <u>A. Strudza (Canada)</u> | |

Debate: Partial Breast Irradiation with 1-3 fractions - LIVE

Friday, 7 May 2021 14:15 - 15:30

Chairs: V. Strnad (Germany) and C. Yashar (USA)

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|-------|------------------------------------|-----------|
| 14:15 | For the motion | SP - 0077 |
| | <u>J.M. Hannoun-Levi (France)</u> | |
| 14:30 | Against the motion | SP - 0078 |
| | <u>O. Kaidar-Person (Israel)</u> | |
| 14:45 | For the motion rebuttal | SP - 0079 |
| | <u>R. Kuske (USA)</u> | |
| 15:00 | Against the motion rebuttal | SP - 0080 |
| | <u>I. Meattini (Italy)</u> | |
| 15:15 | Discussion | 0081 |

Symposium: Accelerated partial breast irradiation - Phase 3 trial results

Friday, 7 May 2021 16:00 - 17:15

- | | | |
|-------|--|-----------|
| 16:00 | Results of brachytherapy trials | SP - 0082 |
| | <u>V. Strnad (Germany)</u> | |

- 16:18 **Results of external beam radiotherapy trials** SP - 0083
I. Bhattacharya (UK)
- 16:36 **Results of IORT (Intra-Operative Radiation Therapy) trials** SP - 0084
R. Orecchia (USA)
- 16:54 **Ongoing clinical trials and future trends of APBI** SP - 0085
D. Wazer (USA)

Symposium: Head and Neck recurrences after full course Radiotherapy

Friday, 7 May 2021 16:00 - 17:15

- 16:00 **Why surgery?** SP - 0086
TBC
- 16:25 **Why EBRT?** SP - 0087
P. Bonomo (Italy)
- 16:50 **Why Brachytherapy?** SP - 0088
R. Martinez-.Monge (Spain)

Saturday
8 May 2021



Teaching lecture: How to implement and execute an incident learning system

Saturday, 8 May 2021 08:00 - 08:40

08:00 **How to implement and execute an incident learning system** SP - 0089

L. Fong de los Santos (USA)

Debate: Optimal treatment for periorificial high risk non-melanoma skin cancer - LIVE

Saturday, 8 May 2021 08:45 - 10:00

Chairs: G. Fogarty (Australia) and A. Rembielak (UK)

08:45 **This house believes that surgery should be considered for lip high risk non-melanoma skin cancer** SP - 0090

C. Newlands (USA)

09:00 **This house believes that radiotherapy/brachytherapy should be considered for lip high risk non-melanoma skin cancer** SP - 0091

A. Budrukkar (India)

09:15 **This house believes that surgery should be considered for nose high risk non-melanoma skin cancer** SP - 0092

F. Bussu (Italy)

09:30 **Brachytherapy a useful tool for nasal and peri-nasal tumors** SP - 0093

B. Johansson (Sweden)

09:45 **Discussion** SP - 0094

Symposium: Guidelines and recommendations in gynaecological cancers

Saturday, 8 May 2021 08:45 - 10:00

08:45 **IBS/GEC-ESTRO recommendations for CT based treatment of cervical cancer** SP - 0095

U. Mahantshetty (India)

09:03 **JASTRO recommendations for CT based brachytherapy for cervical cancer** SP - 0096

T. Ohno (Japan)

09:21 **GEC-ESTRO/IBS/ABS recommendations for treatment planning,** SP - 0097

K. Tanderup (Denmark)

09:39 **GEC-ESTRO/ABS/CARO recommendations on target definition in vaginal recurrences** SP - 0098

R. Nout (The Netherlands)

Proffered papers: Proffered papers: Urogenital cancers

Saturday, 8 May 2021 10:30 - 11:30

10:30 **Long-term outcomes of patients treated with I-125 seed implant versus surgery for prostate cancer** OC - 0099

G. Locke (Canada), J. Crook, C. Catton, Z. Liu, S. Raman, P. Chung, A. Berlin, N. Fleshner, J. Helou

10:40 **20 years of iodine-seed prostate brachytherapy: monotherapy-outcomes in 1013 patients** OC - 0100

A. Goñi Ramirez (Spain), B. De Paula Carranza, V. Pastor Sanchís, A. Bartrés Salido, E. Saenz Urturi Albisu, N. Bultó Boqué, M. Eguiguren Bastida, M. Pagola Divasson, A. Ayete, N. Suarez, D. Ortiz de Urbina Ugarte, M. Erzilbengoa, J. Rosa Nieto

10:50 **17 years' of EBRT plus HDR brachytherapy boost in high risk localized prostate cancer patients** OC - 0101

E. Vigneault (Canada), D. Carignan, S. Magnan, M. Froment, W. Foster, S. Aubin, M. Lavallée, F. Lacroix, A. Cantin, É. Poulin, A. Martin

11:00 **HDR brachytherapy as a single-day monotherapy: Survival results of a phase II randomized trial** OC - 0102

M. Jolicoeur (Canada), T. Derashodian, T. Nguyen-Huynh, E. Hillmann, T. Denis, R. Héliou

11:10 **Comparative study of brachytherapy vs. radical cystectomy for cT1-2 muscle-invasive bladder cancer** OC - 0103

B. Pieters (The Netherlands), C. Voskuilen, J. Bosschieter, E. van Werkhoven, K. Hendricksen, A. Vis, F. Pos, M. Burger, H. van der Poel, L. Moonen, S. Horenblas, A. Bex, J. Nieuwenhuijzen, B. van Rhijn

11:20 **High-dose rate brachytherapy in localized penile cancer: clinical outcome analysis** OC - 0104

N. Martz (France), Y. Bodokh, M. Gauthier, R. Schiappa, B. Thamphya, M. Chand, D. Lam Cham Kee, J. Hannoun-Levi

Proffered papers: Proffered papers: Imaging and more

Saturday, 8 May 2021 10:30 - 11:30

10:30 **MRI-guided robotic needle insertion for prostate brachytherapy: proof of principle study in patients** OC - 0105

M. Moerland (The Netherlands), A. van Lier, L. van Schelven, M. van Son, M. Peters, E. Boskovic, R. Schokker, K. van Vliet-van den Ende, S. van der Vegt, J. Verkerk, E. Beld, W. Eppinga, J. Lagendijk, J. van der Voort van Zyp

- 10:40 **US-guided EM tracked system compared to OncentraProstate for HDR brachytherapy: a first in-men study** OC - 0106
M.C. Lavallee (Canada), A. Cantin, M. Lefebvre, W. Foster, S. Aubin, A.G. Martin, L. Beaulieu, E. Vigneault
- 10:50 **Dosimetric Impact of CT and TRUS vs MR based volumes for Brachytherapy of Cervical Cancers** OC - 0107
J. Swamidas (India), J. Jain, N. Nesvacil, K. Tanderup, C. Kirisits, M. Schimd, P. Agarwal, K. Joshi, P. Naga CH, C. Ranjan, S.K. Gudi, L. Gurram, S. Chopra, U. Mahantshetty
- 11:00 **Impact of patient positioning on interstitial multicatheter HDR brachytherapy of the breast** OC - 0108
N. Abu-Hossin (Germany), K. Kallis, V. Strnad, R. Fietkau, C. Bert
- 11:10 **Implant-based CT estimation towards adaptive breast brachytherapy** OC - 0109
C. Dürrbeck (Germany), L. Pflaum, M. Schulz, K. Kallis, T. Geimer, N. Abu-Hossin, V. Strnad, A. Maier, R. Fietkau, C. Bert
- 11:20 **Characterisation of an inorganic scintillation detector system for time resolved in vivo dosimetry** OC - 0110
J. Johansen (Denmark), E.B. Johansen, J. Overgaard, D. Piché-Meunier, H.M.L. Rosales, D. Tho, K. Tanderup, S. Beddar, L. Beaulieu, G. Kertzscher

Proffered papers: Proffered papers: Training, GI and Eye

Saturday, 8 May 2021 11:40 - 12:40

- 11:40 **Intraluminal brachytherapy with chemoradiation versus chemoradiation alone in carcinoma of esophagus** OC - 0111
A. Krishna (India), D. Fernandes, A. MS, S. Shankar, S. Rao, K. Mahesh
- 11:50 **development of a dynamic-shielding intensity modulated endorectal brachytherapy applicator** OC - 0112
A. Thibodeau-Antonacci (Canada), T. Vuong, H. Bekerat, L. Liang, S. Abbasinejad Enger
- 12:00 **Evaluation of early clinical response of CT-guided HDR interstitial brachytherapy in HCC** OC - 0113
F. Walter (Germany), F. Fuchs, J. Well, L. Nierer, G. Landry, M. Seidensticker, J. Ricke, C. Belka, S. Corradini
- 12:10 **Results from the First Spanish National Survey on Epiescleral Brachytherapy for Uveal Melanoma** OC - 0114
I. Rodriguez Rodriguez (Spain)
- 12:20 **Detector-based quality assurance of assembled brachytherapy eye plaques** OC - 0115
S. Moehle (Canada), I. Spadinger
- 12:30 **Cervical cancer brachytherapy training by 3D printing tissue equivalent patient anatomy from DICOMs** OC - 0116
J. McGee (USA)

Poster presentation: GEC-ESTRO Best Poster Presentations

Saturday, 8 May 2021 11:40 - 12:40

- 11:40 **HDR BT in Non melanoma Skin Cancer: Results and toxicity with different techniques and applicators.** *PP - 0117*
S. Rodriguez Villalba (Spain), P. Monasor Denia, A. Acosta Rojas, M.J. Pérez-Calatayud, J. Pérez-Calatayud, M. Santos Ortega
- 11:40 **Dosimeter evaluation for measurement of radial dose distributions for electronic brachytherapy** *PP - 0118*
A. Walter (USA), L. DeWerd
- 11:40 **8-Gy single-fraction HDR brachytherapy boost after WBI on localized breast cancer in young women** *PP - 0119*
A. La Rosa de los Ríos (Spain), B. Quiles, J.L. Guinot, M. Tortajada, M. Santos, A. Montaner, A. Sanchez, L. Arribas
- 11:40 **Applicator visualization using ultrashort echo time MRI for HDR endorectal brachytherapy** *PP - 0120*
E. Kerkhof (The Netherlands), R. van den Ende, E. Ercan, R. Keesman, C. Marijnen, U. van der Heide
- 11:40 **HDR Brachytherapy as Monotherapy for Prostate Cancer: Early Toxicity of a Randomized Phase II Trial** *PP - 0121*
M. Jolicoeur (Canada), T. Derashodian, T. Nguyen-Huynh, E. de Castro Hillmann, D. Berbiche, D. Truchon, R. Héliou, M. Mondat
- 11:40 **MRI based tumour radiomics in carcinoma cervix: a potential predictor of response to chemoradiation** *PP - 0122*
P. Nayak (India)

Discussion forum: Single dose vs fractionated HDR monotherapy for prostate cancer– LIVE

Saturday, 8 May 2021 13:45 - 14:15

Chairs: A. Salgado (Chile) and B. Cox (USA)

Discussants: P. Hoskin (UK), G. Morton (Canada), Jeremy Millar (Australia) and B. Davis (USA)

Discussion forum: 21st century brachytherapy: Is it available, affordable and relevant? – LIVE

Saturday, 8 May 2021 13:45 - 14:15

Chairs: A. Sturdza (Austria) and K. Akbarov (Spain)

Discussants: S. Chopra (India), P. Orio (USA), M. Kamrava (USA) and A. Sturdza (Austria)

Symposium: Gastrointestinal brachytherapy

Saturday, 8 May 2021 14:15 - 15:30

- 14:15 **Can Imaging technique affect treatment planning in brachytherapy of rectal and anal canal carcinomas?** *SP - 0123*

14:40 **Liver brachytherapy: A comprehensive review** SP - 0124
P. Devlin (USA)

15:05 **Oesophagus: An orphan topic?** SP - 0125
A. Rovirosa (Spain)

Symposium: Brachytherapy physics 2030 – Adaptive dose delivery and planning

Saturday, 8 May 2021 14:15 - 15:30

14:15 **Image registration, automated segmentation, and dose summation** SP - 0126
J. Swamidas (India)

14:33 **Automation for treatment planning and quality assurance (actual advancements)** SP - 0127
C. Deufel (USA)

14:51 **The role of physics, dosimetry, and physicians in an era of automation: how will our practice change?** SP - 0128
J.A.M. Cunha (USA)

15:09 **What is this thing called AI and how can it help brachytherapy?** SP - 0129
P. Bosman (The Netherlands)

Proffered papers: Proffered papers: Dosimetry and quality assurance

Saturday, 8 May 2021 16:00 - 17:00

16:00 **Comprehensive 192Ir HDR QA using a pixel segmented ionization chamber** OC - 0130
A. Lekatou (Greece), V. Peppas, P. Papagiannis

16:10 **WP21 BRAPHYQS survey of differences in 192Ir and 60Co brachytherapy RAKR determinations** OC - 0131
J. Vijande (Spain), Å. Carlsson Tedgren, F. Ballester, D. Baltas, P. Papagiannis, M.J. Rivard, F. Siebert, L. DeWerd, J. Perez-Calatayud

16:20 **Brachytherapy TG-43 dosimetry characterization of the INTRABEAM source** OC - 0132
D.S. Ayala Alvarez (Canada), P.G.F. Watson, M. Popovic, V.J. Heng, M.D.C. Evans, J. Seuntjens

16:30 **Dosimetric characterizations of a novel inorganic scintillating detector - HDR brachytherapy** OC - 0133
S.B.C. Debnath (France), D. Tonneau, C. Fauquet, A. Tallet, A. Goncalves, M. Ferre, J. Darreon

16:40 **Replacing TG-43U1 by TG-186 in HDR liver brachytherapy has a dosimetric impact on treatment plans** OC - 0134

A.S. Duque (Germany), T. van Wagenberg, S. Corradini, F. Kamp, M. Seidensticker, F. Streitparth, F. Walter, K. Parodi, F. Verhaegen, J. Ricke, C. Belka, G. Paiva Fonseca, G. Landry

16:50 **GEC-ESTRO / ACROP recommendations for Quality Assurance of Ultrasound in Brachytherapy** OC - 0135

F. Siebert (Germany), C. Kirisits, T. Paulsen Hellebust, D. Baltas, F. Verhaegen, S. Camps, B. Pieters, G. Kovács, B. Thomadsen

Symposium: Brachytherapy: Strategies to improve utilisation in various sites and settings

Saturday, 8 May 2021 16:00 - 17:15

16:00 **GEC-ESTRO viewpoint in strategies to increase brachytherapy utilization** SP - 0136

B. Pieters (The Netherlands)

16:18 **Brachytherapy: Strategies to improve utilization in various sites and settings (ABS Viewpoint)** SP - 0137

C. Yashar (USA)

16:36 **Brachytherapy: Strategies to improve utilization in various sites and settings: (IBS Viewpoint)** SP - 0138

D.N. Sharma (India)

16:54 **Strategies to improve utilization in various sites and Latin-american settings** SP - 0139

G.J. Sarria Bardales (Peru)

Closing session: Closing remarks

Saturday, 8 May 2021 17:15 - 17:30

17:15 **Closing remarks** SP - 0140

B. Pieters (The Netherlands)

Poster Presentation



Poster Presentation: Gynaecology

- Assessment of interstitial needles with 3D-TRUS in cervical cancer brachytherapy** *PP - 0141*
J. Knoth (Austria), N. Nesvacil, A. Sturdza, G. Kronreif, J. Widder, C. Kirisits, M. Schmid
- Vaginal dose de-escalation in cervix brachytherapy** *PP - 0142*
G. Aldred (United Kingdom), L. Hallett
- Hybrid Tandem & Ovoids Brachytherapy in Locally Advanced Cervical Cancer:Dose & Tumor Volume Metrics** *PP - 0143*
A. Rivera (USA), M. Wassel, P. Brodin, R. Yaparpalvi, C. Velten, R. Kabarriti, M. Garg, S. Kalnicki, K. Mehta
- Intensity modulated HDR GYN cervix brachytherapy** *PP - 0144*
J. Dupere (USA), J.J. Munro III, D.C. Medich

Poster Presentation: Physics

- A treatment analysis tool for clinical, dosimetric and outcome data reported in the EMBRACE trial** *PP - 0151*
S. Ecker (Austria), C. Kirisits, Y. Seppenwoolde, K. Tanderup, A. De Leeuw, A. Sturdza, M. Schmid, G. Heilemann, R. Pötter, N. Nesvacil
- Catheter displacements and dosimetric impact in focal salvage high-dose-rate prostate brachytherapy.** *PP - 0145*
M. Moerland (The Netherlands), M. van Son, M. Peters, W. Eppinga, R. Schokker, J. Lagendijk, J. van der Voort van Zyp
- Quality assurance of curved catheter paths in interstitial brachytherapy using a constructed phantom** *PP - 0146*
N. Abu-Hossin (Germany), S. Gulde, C. Dürrbeck, V. Strnad, R. Fietkau, C. Bert
- Volumetric dosimetry for eye plaque brachytherapy using 3D treatment planning software** *PP - 0147*
M. Rezaee (USA), E. Huang, M. Morcos, H. Quon, A. Ponce Kiess, Z. Correa, R. Hobbs
- A brachytherapy process review and failure mode effect analysis during a system replacement.** *PP - 0148*
E. Flower (Australia), G. Busuttill, E. Sullivan, S. Zanjani, K. Tran, H. Nguyen, D. Thwaites, J. Sykes, J. Chard, A. Salkeld
- Dosimetry of Intraocular Tumors with Small Apical Heights Using I-125 Plaques** *PP - 0149*
M. Rezaee (USA), E. Huang, M. Morcos, H. Quon, A. Ponce Kiess, Z. Correa, R. Hobbs
- Commissioning of a GPU-based multi-criteria optimisation algorithm for HDR brachytherapy** *PP - 0150*
C. Bélanger (Canada), É. Poulin, S. Aubin, J.A.M. Cunha, L. Beaulieu

Proof of principle measurements for an intensity modulated brachytherapy tandem *PP* - 0152

M. Morcos (Canada), H. Bekerat, S. Enger

In Vivo Dosimetry in brachytherapy: A first clinical trial implementation with a mPSD detector *PP* - 0153

Abstract withdrawn

Knowledge-based Inverse Treatment Planning for Low-Dose-Rate Prostate Brachytherapy *PP* - 0154

C. Guthier (USA), P. Orio, I. Buzurovic, R. Cormack

Poster Presentation: Prostate

focal treatment of prostate cancer with 169Yb-based high dose rate intensity modulated brachytherapy *PP* - 0164

J. Lavoie (Canada), C. Ménard, G. Famulari, D. Béliveau-Nadeau, S. Enger

Antibiotic Prophylaxis for Prostate HDR Brachytherapy: Interim Results of a Phase III trial *PP* - 0155

T. Derashodian (Canada), E. de castro Hillmann, T. Nguyen-Huynh, M. Jolicoeur

HDR and LDR comparison as monotherapy in localized prostate cancer: PSA kinetic and late toxicity *PP* - 0156

T. Reynaud (Canada), L. Hathout, D. Carignan, M. Barkati, A. Martin, W. Foster, F. Lacroix, G. Delouya, D. Tausky, E. Vigneault

Long-term Outcomes of Prostate Cancer Patients treated with Low Dose Rate Brachytherapy *PP* - 0157

T. McMullan (United Kingdom), B. Nailon, D. McLaren, W. Keough, A. Law, T. Berger, T. Ronaldson, J. Mitchell

Registration accuracy of an integrated MR -TRUS navigation system for prostate HDR brachytherapy *PP* - 0158

S. Kadoury (Canada), D. Lopera, R. Shams, D. Béliveau-Nadeau, G. Delouya, K. Boudam, J. Carrier, C. Menard

HDR Brachytherapy Monotherapy in patients with Low/Intermediate-risk Prostate Cancer *PP* - 0159

E. Moreno Olmedo (Spain), G. Nagore, V. Suárez-Gironzini, C. Minguez, E. Gómez, A. Garcia, V. Ciapa, I. Marrone, E. López

Prostatitis after HDR brachytherapy monotherapy *PP* - 0160

M. Jolicoeur (Canada), T. Derashodian, T. Nguyen-Huynh, E. de castro hillmann, R. héliou

mpMRI-guided dose escalation to DIL with US-planned HDR prostate brachytherapy: a phase II study *PP* - 0161

J. Ding (Canada), S. Tissaverasinghe, D. Batchelar, M. Hilts, C. Araujo, F. Bachand, J. Crook

MR-assisted whole salvage HDR prostate brachytherapy with intra-prostatic boost: a prospective study *PP* - 0162

H. Chung (Canada), A. Loblaw, C. Tseng, J. Murgic, L. D'Alimonte, A. Ravi, M. Davidson, M. Wronski, M. Haider, G. Morton

Very long-term biochemical and dosimetric outcomes of LDR boost in intermediate-risk prostate cancer *PP* - 0163

A. Goñi Ramirez (Spain), B. De Paula Carranza, V. Pastor Sanchis, A. Bartrés Salido, E. Saenz de Urturi Albisu, N. Bultó Boqué, M. Eguiguren Bastida, M. Pagola Divasson, A. Ayete, D. Ortiz de Urbina Ugarte, N. Suarez, M. Erzilbengoa, J. Rosa Nieto

Poster Presentation: Skin

Contact X-Ray Brachytherapy for eyelid carcinoma: Efficacy and toxicity in 69 patients *PP* - 0165

S. Sumodhee (France), K. Benezery, D. Baron, R. Natale, M. Gautier, C. Dejean, J. Gérard

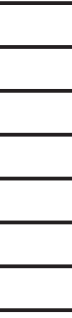
Failure modes and effects analysis guided implementation of 3D printed bolus for skin brachytherapy *PP* - 0166

K. Byrnes (Australia), L. Hamlett, D. Wood, D. Vignarajah, D. Willis, M. Hoozer

what about post-operative high-dose-rate brachytherapy in the management of keloids? 5-year outcomes *PP* - 0167

G.E.F. Noubbigh (Tunisia), S. zarraa, S. yahiaoui, A. mousli, M. mahdouani, R. abidi, A. youssfi, W. gargouri, K. mahjoubi, A. belaid, M. besbes, L. kochbati, C. nasr

Posters



Poster: Breast

External beam radiotherapy and brachytherapy for partial breast irradiation: dosimetric comparison. PO - 0168

A. Irina (Russian Federation), N. Sergey, B. Zhanna, M. Julia, K. Sergey

Effects of uncertainty with Strut Adjusted Volume Implant applicator in Japan. PO - 0169

K. Miyaura (Japan), T. Fujii, T. Kubo, H. Shinjoh, M. Kato, K. Toyofuku, A. Niiya, R. Kobayashi, Y. Ozawa, K. Murakami, M. Morota, A. Imai, Y. Ito, Y. Kagami

Impact of risk factors for long-term breast recurrence of APBI with interstitial HDR brachytherapy PO - 0170

J. Guinot (Spain), O. Revilla, M. Moreno-Manzanaro, M. Marti, L. Gonzalez, P. Blasco, M. Peña, B. Quiles, A. La Rosa, M.I. Tortajada, M.A. Santos, L. Arribas

Poster: Gynaecology

Intraoperative Brachytherapy (HDR-IOBT) in advanced or recurrence gynecologic cancer. PO - 0171

I. Visus (Spain), E. Villafranca, A. Sola, M. Barrado, N. Fuentemilla, S. Pellejero, J.C. Muruzabal, S. Aguirre, S. Lapeña, O. Tarrío, C. Tauste, J. Jiménez, M.Á. Ciga

Towards real-world quality cervical brachytherapy: how convergence met complexity, taxing capacity PO - 0172

F. Huang (Canada), B. Schultz, S. Menon, N. Vawda, Y. Nijjar, B. Rose, M. Dickey, K. Trenka, J. Zimmer, K. Gadbois, A. Heikal, B. Burke, L. Baldwin, J. Cuartero, E. Wiebe, G. Menon

Needle localization in MRI-guided gynecological brachytherapy using a PETRA sequence PO - 0173

E. Kaza (USA), R. Cormack, I. Buzurovic

Cervix cancer treated with PDR brachytherapy boost PO - 0174

G. Dickie (Australia), P. Chan, R. Cheuk, M. Grogan, L. Tripcony

Deformable registration for HDR Cervical case: Dose accumulation for multiple deformation techniques PO - 0175

V. Narayana (USA), V. Kumar, P. Wang

Clinical outcomes of cervical cancer with CT-based image-guided brachytherapy PO - 0176

W.L. Chan (Hong Kong (SAR) China), R.P. Tse, P.P. Ho, S. Siu, A. Leung, F. Tang, H.C. Choi, T. Ho, O. Leung, A. Lee, R. Ngan

A new software for designing patient-specific sleeves for the Montreal split-ring applicator PO - 0177

B. Basaric (Canada), L. Morgan, C. Engelberts, M. Crocker, D. Orbovic, J. Carrier, S. Bedwani, M. Beauchemin, M. Barkati, Y. Kamio, F. DeBlois

Feasibility and Outcomes for Cervical Cancer Patients Treated with Hybrid Brachytherapy Applicators	<i>PO - 0178</i>
<u>A. Keller (USA)</u> , J. Rodríguez-López, A. Patel, H. Kim, C. Houser, P. Sukumvanich, J. Berger, M. Boisen, R. Edwards, S. Taylor, M. Courtney-Brooks, A. Olawaiye, B. Orr, S. Beriwal	
Hypnosedation for endocavitary uterovaginal applications: a pilot study	<i>PO - 0179</i>
<u>M. Kissel (France)</u> , M. Andraud, A. Duhamel, G. Boulle, E. Romano, S. Achkar, R. Bourdais, M. Ta, A. Pounou, T. Kumar, B. Celestin, L. Bordenave, V. Billard, C. Haie-Meder, C. Chargari	
Impact of hybrid brachytherapy in cervical cancer: A survival and toxicity profile assessment	<i>PO - 0180</i>
<u>V. Pareek (India)</u> , M. Chandra, R. Bhalavat	
Comparison of vaginal doses and toxicities between two brachytherapy applicators in Carcinoma Cervix	<i>PO - 0181</i>
<u>H.K. BAJWA (India)</u> , A. Rahi, R. Singareddy, A.K. Talluri, K.R. Alluri	
Excellent Outcomes with CT-Based HDR Brachytherapy for Locally Advanced Cervical Cancer	<i>PO - 0182</i>
<u>J. Shiao (USA)</u> , D. Holt, T. Robin, C. Fisher	
Intracavitary electronic brachytherapy (e-BT) for gynecological malignancies	<i>PO - 0183</i>
<u>G.R. Sarria (Germany)</u> , E. Sperk, F. Wenz, F. Schneider, Y. Abo-Madyan, F. Giordano, M. Ehmann	
What do women say about their experiences of brachytherapy for cervical cancer? A qualitative study.	<i>PO - 0184</i>
<u>P. Humphrey (United Kingdom)</u>	
Kelowna GYN template-based high-dose rate interstitial brachytherapy: design and dosimetric results	<i>PO - 0185</i>
<u>J. Shiao (USA)</u> , D. Holt, T. Robin, C. Fisher	
Analysis of Outcomes and Cost Effectiveness of Inpatient vs. Outpatient Based Interstitial Vaginal Brachytherapy	<i>PO - 0186</i>
<u>S. Azghadi (USA)</u> , A. Moran, B.M. Palo, D. San, R. Valicenti, X. Zhao	
Vaginal dose reduction by changing the ovoidloading pattern in intracavitary brachytherapy of cervix	<i>PO - 0187</i>
<u>R. Rangarajan (India)</u> , S. Subramaniam, K. Gopalakrishnan, K. K	
Are active dwells always necessary in the applicator ring in the brachytherapy of cervical cancer?	<i>PO - 0188</i>
<u>J. Vízkeleti (Hungary)</u> , G. Fröhlich, K. Horváth, N. Nguyen Anhhong, C. Polgár, T. Major	
The second planning-CT in a two daily fractions implant can be omitted in cervical cancer IGABT	<i>PO - 0189</i>
<u>O. Engel (Spain)</u> , S. Córdoba, M.Á. Arroyo, N. Rodriguez, J. Fernando, C. de la Fuente, I. Zapata, J. Velasco, B. Gil, M. López, R. Benlloch, M. Hernandez	

A single institution review of vaginal brachytherapy with customised moulds and interstitial needles PO - 0190

E. Flower (Australia), J. Chard, G. Busuttill, S. Zanjani, W. Smith, K. Tran, E. Sullivan, D. Thwaites, V. Do

Plan evaluation of the interstitial contribution in brachytherapy for cancer cervix PO - 0191

A. JOY (India), A. Kumar, J. Joseph, J. Krishna K M, N. Natarajan, L. M Nair, F. V James

Prototype testing the 3D-printed Montreal split-ring applicator (GYN) using biocompatible materials PO - 0192

Y. Kamio (Canada), M. Roy, L. Morgan, M. Barkati, M. Beauchemin, J. Carrier, B. Basaric, F. DeBlois, S. Bedwani

Impact of Vaginal Reference Length on Organs at Risk doses in Carcinoma Cervix Brachytherapy PO - 0193

H.K. BAJWA (India), R. Singareddy, D. Shiva, K.R. Alluri

Intracavitary brachytherapy for endometrial carcinoma: experience with Co-60 HDR brachytherapy. PO - 0194

J.A. Domínguez Rullán (Spain), T. Muñoz Miguelañez, R. Colmenares Fernández, M. Martín Sánchez, M. Cámara Gallego, S. Sancho García

Clinical outcome of intracavitary and interstitial brachytherapy in locally advanced cervical cancer PO - 0195

P. Chitmanee (Thailand)

Dosimetric Analysis of Combined Intracavitary and Interstitial Needles Placement for Cervical Cancer PO - 0196

J. Shiao (USA), T. Patton, D. Holt, T. Robin, C. Fisher

Systemic analysis of vaginal wall dose between various vaginal brachytherapy: phantom case PO - 0197

R. Kim (USA)

Applicator-guided SBRT boost combined with intracavitary brachytherapy for advanced cervical cancer PO - 0198

C. Constantinescu (Saudi Arabia), N. Jastaniyah, S. Wadi Ramahi, A. Nobah

Poster: Head & Neck

HDR brachytherapy as a salvage therapy in head and neck cancers PO - 0199

M. Ait Erraisse (Morocco), F.Z. Abboud, M.A. Youssoufi, M. Bougtib, T. Bouhafa, K. Hassouni

Poster: Physics

- Comparison of catheter position planning algorithms for HDR prostate brachytherapy under uncertainty** PO - 0200
M.C. van der Meer (The Netherlands), B.R. Pieters, P. Niehoff, N. Milickovic, Y. Niatsetski, T. Alderliesten, P.A. Bosman, A. Bel
- A Miniature Robotic System for Interstitial Brachytherapy Needle Insertion** PO - 0201
I. Buzurovic (USA), X. Pei, Y. Hu
- commissioning of a Venezia applicator: discrepancies between expected and actual source positions** PO - 0202
N. Fuentesmilla (Spain), A. Fernandez, S. Pellejero, R. Estrada, J. Escobar, L. Bragado, F. Caudepon, F. Mañeru, S. Miquelez, E. Villafranca, M. Barrado
- Range of intra-fraction dose uncertainty in cervical cancer HDR brachytherapy.** PO - 0203
V. Ferrándiz (Spain), M. Zajac, A. Tornero, M.D. Rey-Baltar Oramas, M. Federico
- Towards an absolute dosimetry for 192-Ir high dose rate sources with micro-ionization chamber** PO - 0204
M. Martínez Albaladejo (United Kingdom), I. Seedhouse, C. Edwards
- Deep learning for automated applicator reconstruction in high-dose-rate prostate brachytherapy** PO - 0205
C. Deufel (USA), L. Weishaupt, H. Kamal Sayed, C. Choo, B. Stish
- A dosimetric index to assess cervix brachytherapy implants: Dovix** PO - 0206
J. Chimeno (Spain), N. Fuentesmilla, P. Monasor, F. Celada, E. Villafranca, S. Rodriguez, M.J. Perez-Calatayud, S. Pellejero, J. Perez-Calatayud
- Radiation protection preparedness using LASAIR in case of malevolent use of brachytherapy sources** PO - 0207
T. Palmqvist (Sweden), H. Walter, G. Heinrich, I. Toma-Dasu
- Do the results improve when using inverse planning multi-solution tool in HDR prostate BT?** PO - 0208
N. Fuentesmilla (Spain), V. Raposo, A. Fernandez, R. Estrada, S. Pellejero, L. Bragado, F. Caudepon, F. Mañeru, V. De la Llana, S. Miquelez, J. Escobar
- Practical considerations on the use of EM tracking technology for clinical HDR brachytherapy** PO - 0209
M.C. Lavalley (Canada), A. Cantin, E. Vigneault, W. Foster, S. Aubin, A. Martin, M. Lefebvre, L. Beaulieu
- Status of HDR measurements at PTB** PO - 0210
R. Behrens (Germany), F. Grote, A. Kasper

- BrachyClip with I-125 seed** PO - 0211
J. Dupere (USA), D.E. Wazer, T.A. DiPetrillo, J.J. Munro III, D.C. Medich
- Use of rectal spacing hydrogel significantly reduces rectal dose in prostate LDR brachytherapy** PO - 0212
S. Mehta (United Kingdom), S. Langley, S. Khaksar, C. Perna, S. Otter, C. Mikropoulos, M. Cunningham, S. Uribe-Lewis
- Development of equidistance marker to predict dwell position for MR-guided cervix brachytherapy** PO - 0213
J. KIM (Korea Republic of), J. Sung, H. Jin, H.J. An, J. Kim, J.M. Park, C.H. Choi
- Investigation of obstructions in ring applicators during pulsed dose rate cervix brachytherapy** PO - 0214
G. Menon (Canada), B. Long, R. Petit, J. Zimmer, K. Gadbois, Y. Niatsetski, E. Wiebe, J. Cuartero, F. Huang, E. Yip
- A novel in-vivo 3D dosimetry device in GYN HDR brachytherapy using Micro Silica Bead TLDs** PO - 0215
R. Jaberi (Iran Islamic Republic of), S. Babaloui, M. Moshtaghi, A. Shirazi, M.H. Gholami, A. L. Palmer, S. Jafari
- Healthy tissue constraints for catheter position optimization in HDR prostate brachytherapy planning** PO - 0216
M.C. van der Meer (The Netherlands), D. van Dorth, P.A. Bosman, B.R. Pieters, Y. Niatsetski, T. Alderliesten, A. Bel
- Effect of transit dose on HDR brachytherapy – a 4D Monte Carlo study** PO - 0217
Abstract withdrawn
- Characterising a Papillon 50 electronic brachytherapy source using a plastic scintillation detector** PO - 0218
P. Georgi (Denmark), G. Kertzsch, T. Schneider, L. Nyvang Jensen, K. Tanderup, J. Graversen Johansen
- Analysis of the image quality of two different I-125 seed models using TRUS, MR and CT** PO - 0219
H. Hermani (Germany), H. Haddad, K. Werner, S. Temming, M. Pinkawa
- Determination of dose deposition from an Ocular Brachytherapy source: simulation data with TOPAS** PO - 0220
I. Knoll (Brazil), L. de Souza, P. Ramon, A. Quevedo, T. Alves Pianoschi Alva, M. Salomón Alva Sánchez
- Doses to OAR during LDR permanent prostate treatment for monotherapy patient cohort** PO - 0221
T. Keogh (Ireland)

- Primary standards and measurement methods for X-ray emitting electronic brachytherapy devices** *PO - 0222*
T. Schneider (Germany)
- Ir-192 position measurement for pre-treatment QA using a fluorescent screen-based optical detector** *PO - 0223*
W.Y. Lee (Hong Kong (SAR) China), K. Kwan, D. Wong, V. Lee
- Dosimetric impact of a model based algorithm for skin cancer interventional radiotherapy** *PO - 0224*
E. Placidi (Italy), A. Napolitano, B. Fionda, G. Stimato, V. Lancellotta, S. Teodoli, C. Casà, F. Greco, P. Cornacchione, S. Menna, G. Meffe, M.A. Gambacorta, L. Tagliaferri, L. Indovina
- Automatic reporting of vaginal dose points for cervical cancer HDR-brachytherapy** *PO - 0225*
J. Chimenó (Spain), P. Monasor, N. Fuentemilla, F. Celada, E. Villafranca, S. Rodríguez, M.J. Perez-Calatayud, S. Pellejero, F. Blázquez, V. Carmona, J. Perez-Calatayud
- 3-D Printed modified S-Tube for treatment of cervical cancer with high dose rate brachytherapy** *PO - 0226*
M. Du Toit (South Africa), R. van Reenen, H. Simonds, C. Trauernicht
- Verification measurements for brachytherapy reference data** *PO - 0227*
R. Wilks (Australia), S. Crowe
- Inverse versus forward optimisation methods in brachytherapy of breast, cervix and prostate cancer** *PO - 0228*
G. Fröhlich (Hungary), G. Geszti, J. Vízkeleti, P. Ágoston, C. Polgár, T. Major
- Towards informed and digitized HDR brachytherapy QA: Quantitative analysis of GYN applicators** *PO - 0229*
S. Aldelaijan (USA), M. Khosravi, Y. Khouj, T. Harris, D. O'Farrell, J. Seuntjens, S. Devic, I. Buzurovic

Poster: Prostate

- Subdomains of erectile and urinary function after ultrafocal HDR-brachytherapy for prostate cancer** *PO - 0230*
M. Peters (The Netherlands), M. van Son, M. Moerland, J. Lagendijk, T. Shah, H. Ahmed, J. van der Voort van Zyp
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