

Dear Brachytherapy Society Associates,

Despite the pandemic, it worked and happened! The postponed World Congress of Brachytherapy 2021 finally took place in an online form. I warmly thank Bradley Peters and the whole not listed here team of supporters. Teamwork focusing on a common goal is always fruitful. The GEC-ESTRO Group, in close collaboration with the American Brachytherapy Society (ABS) and supported by the Australasian Brachytherapy Group (ABG), the Asociación Ibero Latinoamericana de Terapia Radiante Oncológica (ALATRO), the Canadian Brachytherapy Group (CBG), the Federation of Asian Organizations for Radiation Oncology (FARO), and the Indian Brachytherapy Society (IBS) achieved the impossible. We met in one virtual space, discussed many intriguing topics, and challenging research results. Long live brachytherapy!



#WeDoBrachy #WeAreBrachy #ThisIsBrachytherapy

The JCB 3/2021 contains seven clinical papers, three physics contributions, one technical note, two case reports, and two reviews. As listed, it starts with data on long-term results of HDR-BT as monotherapy for low- and intermediate-risk prostate cancer submitted by Johansson Bengt *et al.* (Sweden). Their paper on three different irradiation schedules is the evidence of BT effective treatment, with mild long-term side effects. Koichiro Muraki *et al.* (Japan) submitted an analysis of radioactive implant migration in patients treated with ¹²⁵I seeds LDR prostate brachytherapy with median lobe hyperplasia (MLH). They found MLH not to be a solid contraindication for LDR-BT; although, due to possible seed migration and subsequent cold spot formation, one must pay close attention at the time of patients' recruitment.

Next, Remi Bourdais *et al.* (Gustave-Roussy Cancer Campus, France) reported on pulse-dose-rate interstitial BT in anal squamous cell carcinoma as an effective and safe boost modality in selected patients with mainly stage I-II anal tumors. Estimated LC and colostomy-free survival rates at five years were both as high as 88.7%. Apart from the paper, will PDR-BT survive? The last PDR unit in Poland works in Poznań, and the supplier supports its exploitation but stopped its distribution.

Chinese group from Peking submitted a manuscript on the accuracy and dosimetric analysis of 3D-printing non-coplanar template-assisted ¹²⁵I seed implantation for recurrent chest wall cancer. It may be safe and feasible as palliative therapy for unresectable and painful lesions, with a pain relief rate of 87.5%.

The following three clinical manuscripts are related to gynecological malignancies. Uma Devi Goyal *et al.* (USA) investigated the reproducibility of vaginal immobilization balloons in situ overnight for cervical cancer BT. The technique appears to be safe and affords stable dosimetry, as the authors claim. Kiattisa Sommat *et al.* (Singapore) conveyed a single-institution survey on non-anesthetist administered moderate sedation with midazolam and fentanyl for outpatient MRI-aided hybrid intracavitary and interstitial BT in cervical cancer. This method is achievable, well-tolerated, and may significantly lessen the burden on hospital resources, and has the potential to be cost-effective. Again from the USA, Garrett Lee Jensen *et al.* asked if there is a need to treat more than a 2 cm active length in vaginal cuff BT? The answer to be found in the paper.

Consecutive two out of three physical contributions focus on breast cancer BT and the third on esophageal tumor. The Indian group reported the dosimetric comparison between interstitial BT and VMAT for tumor bed boost in breast cancer. As concluded, HDR-BT boost results in significantly lower doses to most OARs (contralateral breast, both lungs, ribs, and skin) with similar heart sparing compared to VMAT. Also, from India, Mourougan Sinnatamby *et al.* investigated the impact of GBBS algorithm on post-mastectomy scar boost irradiation of breast with catheter flap technique. Anzi Zhao *et al.* (Cleveland Clinic, USA) evaluated the dosimetry of a six-channel HDR applicator to treat esophageal cancer concerning lateral directionality and heterogeneous media. Compared to a single-catheter, the six-channel applicator gave rise to significant improvement in sparing non-target tissue.

The single technical report is on deep learning applications in automatic applicators segmentation and reconstruction in CT-based cervix brachytherapy, and comes from another Chinese group. They proposed a novel reconstruction method to localize the Fletcher applicator in 3D-CT images, and proved the method to be accurate, efficient, and clinically attractive towards the automation of BT treatment planning.

Yet again, intentionally, I have designed the cover with diagnostic scans, treatment plan scans, and photos from a case report submitted by Andrea Vavassori *et al.* (European Institute of Oncology, Italy). They presented a successful case of an adjuvant HDR interstitial BT for malignant peripheral nerve sheath tumor of the foot. Such an approach would never be assessed in a randomized trial. What a splendid job! The second case report comes from the Polish Brachytherapy Society group. Łukasz Raszewski *et al.* prepared the description of complete clinical response of renal clear cell carcinoma cutaneous metastases after HDR surface BT. The treatment was associated with low toxicity and clinically excellent local control.

The last two works published in the JCB 3/2021 are essential reviews. In the first one, Enli Chen *et al.* (Hebei Medical University, China) analyzed the efficacy and safety of ^{125}I seed implantation in treating patients with inoperable early-stage non-small cell lung cancer. The meta-analysis showed that the 1-, 2-, and 3-year survival rates were 0.98, 0.83, and 0.65, respectively, and seed implantation in lung cancer settings is safe. However, the approach demands further high-quality clinical research. In the second review, Saeed Karimi *et al.* (Iran) conveyed a systematic review and meta-analysis of efficacy and complications in ^{106}Ru BT for uveal melanoma. Although the studies' heterogeneity was high, with prescription dose ranging from 70 to 250 Gy to the tumor apex, ^{106}Ru BT seems to be successful in LC (overall weighted mean LC was 84%). Of note, the efficacy in controlling uveal melanomas with ^{106}Ru decreases with the increase in tumor thickness.

Have an excellent lecture!

Yours sincerely,
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Editor-in-Chief
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