

Dear Colleagues,

We started a new, 4<sup>th</sup> year of editing Journal of Contemporary Brachytherapy in hope to achieve more and more success. Our main goal is to serve the radiotherapy community and to provide recent knowledge in the field of brachytherapy. In response to the request and in consultation with our colleagues, since early 2012 we have initiated following changes in the membership of the Editors and Editorial Board: Jacek Fijuth MD, PhD, Ass. Prof., Lodz, Poland is no longer the Editor of Educational Corner, however will stay a member of Editorial Board. For this place we invited Brygida Bialas MD, PhD, Institute of Oncology, Gliwice, Poland, who has been a member of the Editorial Board since 2009. Professor Maria Esmeralda Ramos Poli from the Medical Physics Unit, Hospital Santa Maria, CHLN, Lisbon, Portugal is a new member of the Editorial Board and Grzegorz Bielęda MSc, from Brachytherapy Department, GCC Poznan, is a new consulting editor in Editorial Office.

Eight manuscripts are published in this issue – three clinical investigations, concerning breast cancer (toxicity and cosmetic outcome in patients treated with multicatheter balloon brachytherapy), cervical cancer (impact of point an asymmetry on local control and survival for LDR-brachytherapy) and one about Equivalent Dose at 2 Gy for HDR interstitial brachytherapy based on experience in breast and prostate cancer patients. We publish five articles in physics. They concern of mostly interesting subjects like I-125 seed calibration with practical solution to fulfill AAPM-ESTRO recommendations, feasibility of treating breast cancer with a single-entry hybrid applicator in APBI breast brachytherapy, Monte Carlo dosimetric study of the Flexisource Co-60 HDR source, progressive transition from pre-planned to intraoperative optimizing of seed implant and treatment planning study of the 3D dosimetric differences between Co-60 and Ir-192 sources in HDR brachytherapy for cervix cancer. Reports of experienced international teams of researchers encourage you to read the above mentioned articles. We noted that more and more of our colleagues agree to review and to publish their papers in our Journal.

It is worthy to note some news from brachytherapy Web-based reports. Two new studies demonstrate the cosmetic and dosimetric **advantages of the SAVI(R) breast brachytherapy** applicator for treatment of early-stage breast cancer. They are based on multi-site data drawn from over 1,000 patients details advantages of advanced form of breast cancer treatment. The studies were presented as scientific posters at national medical conferences and were drawn from 12 centers participating in the SAVI Collaborative Research Group. Researchers reached two primary conclusions: 1) SAVI radiation therapy provides an excellent or good cosmetic outcomes in the majority of patients. 2) The device can be used as a safe and effective treatment tool for a broad range of women with accelerated partial breast irradiation (APBI), due to the precision of the SAVI applicator delivering the dose. "These studies point to the fact that by minimizing radiation exposure to normal body structures, the SAVI device makes breast-conservation therapy available to many more women, especially for those with breast cancer close to the skin or chest wall" (Constantine Mantz, M.D. Dr. Mantz, co-author on both studies, radiation oncologist and Chief Medical Officer of 21<sup>st</sup> Century Oncology). In a scientific poster presented at the annual meeting of the National Interdisciplinary Breast Center Conference, researchers examined cosmetic outcomes with the device among a group of 1,010 patients. Median age of women in the study group was 63 years. Researchers found highly favorable outcomes with regard to cosmetic results. The second poster was presented at the annual meeting of the American College of Radiation Oncology (ACRO). It examined elements of radiation dosimetry with the SAVI device. Data involving 817 patients drawn from 12 clinical sites demonstrated the device's dosimetric versatility and its ability to precise radiation delivery.

**Eckert & Ziegler BEBIG** announced that the Chinese State Food and Drug Administration (SFDA) has approved its MultiSourceR HDR afterloading system for brachytherapy. MultiSourceR is a afterloader designed for the entire range of HDR brachytherapy applications for cancer treatment. The system provides highest quality and optimal treatment safety, based on Eckert & Ziegler's 35 years of experience in accordance with German manufacturing standards. With MultiSourceR, the customer has the possibility to choose either a well-proven Ir-192 source or a particularly cost-effective Co-60 source with a half life time of 5,26 years. Both sources have two things in common: a small size and a favorable dose distribution. The Co-60 source is still unique worldwide and represents the latest high end technology for miniaturized sources on the medical device market. Eckert & Ziegler BEBIG has installed more than 180 MultiSourceR devices all over the world, in most cases equipped with a Co-60 source.

**Study compared three common prostate cancer treatments** showed that external beam radiation therapy had more side effects, higher costs than "seed" radiation or surgery. The findings were to be presented at a meeting in San Francisco, hosted in part by the American Society of Clinical Oncology (ASCO) and focused on prostate cancer. "Research to date has not given us a clear picture of how each prostate cancer therapy affects men over the long run", study lead author Dr. Jay Ciezki, a staff physician at the Cleveland Clinic, said in an ASCO news release. "Our analysis is one of the first to examine the quality of life and financial costs of these three very common prostate cancer treatment strategies for more than five years after treatment. In conducting the study, researchers examined treatment outcomes among

more than 137,000 men who received external beam radiation, prostatectomy or brachytherapy. They also collected Medicare reimbursement records to determine the total cost per patient per year for each of the three prostate cancer treatments over time. "We were able to get a good picture of the long-term costs of patient care and were surprised to see such dramatic differences among the three treatment strategies", Ciezki noted. The study revealed that overall, just over 7 percent of the men needed some type of follow-up treatment for a problem related to their prostate cancer therapy. Brachytherapy, the researchers noted, resulted in the fewest number of toxicities involving their genital or urinary organs. Just 3.4 percent of those treated with this therapy experienced these types of problems, such as a narrowing of the urethra or bladder bleeding. Brachytherapy also had the lowest cost per patient per year of about \$2,557. A slightly higher number (6.7 percent) of those treated with prostatectomy experienced problems with their genital or urinary organs. This treatment, the study revealed, had a total cost of about \$3,206 per patient-year. Meanwhile, just over 7 percent of patients who received external beam radiation therapy had these adverse effects. This was also the most expensive therapy, at \$6,412 per patient-year. Similarly, 1.7 percent of patients who underwent the treatment had gastrointestinal effects. In contrast, only 0.1 percent of prostatectomy patients and 0.3 percent of brachytherapy patients experienced these issues. "We found that external beam radiotherapy had higher toxicity rates and was the most costly therapy per patient-year", Ciezki said. "While there are clearly still some high-risk prostate cancer patients who will benefit from external beam radiotherapy, for the approximately 80 percent or more of prostate cancer patients diagnosed with low- and intermediate-risk disease, brachytherapy or prostatectomy may be even more preferable options than we have previously assumed for men with low- and intermediate-risk prostate cancer".

The researchers pointed out that their findings are preliminary and more research is needed to investigate why these three prostate cancer therapies produce different results and whether or not certain types of patients are more vulnerable to the long-term effects of a particular treatment. However, the experts said that the decisions about treating the individual patient remain specific to a patient and disease. "The selection of treatment must include a detailed discussion addressing the life expectancy and comorbidities (other illnesses) of the individual, the natural history and curability of the disease and how the potential complications like incontinence, lower urinary tract symptoms, erectile dysfunction and rectal symptoms will impact quality of life", explained Dr. Herbert Lepor, chairman of the department of urology and director of the Smilow Comprehensive Prostate Cancer Center at NYU Langone Medical Center, in New York City. We must note that findings presented at medical meetings are typically considered preliminary, until they are published in a peer-reviewed journal.

Sincerely yours,  
Editor-in-Chief  
Janusz Skowronek, MD, PhD, Ass. Prof.