

## **Landmark Multicenter Retrospective Analysis Of Superficial Radiotherapy (SRT) For The Treatment of Non-Melanoma Skin Cancer (NMSC) with Novel Image Guided SRT (IGSRT)**

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**BACKGROUND** - NMSC is generally treated in dermatology offices using surgical techniques. This study presents the largest modern series of IGSRT for NMSC.

**STUDY TYPE** - multi-center retrospective

**METHODS** - Between July 2013 and July 2019, 2301 NMSC lesions treated with IGSRT were analysed. All lesions received 50, 70 or 100 kiloVoltage(kV) energy IGSRT 2-4 times weekly. KV energy selection was determined by ultrasound depth measurements and/or tumor characteristics. Patients returned 3-6 weeks after completion of therapy for dermoscopy and ultrasound imaging to confirm complete tumor clearance. Patients were then followed every 6-12 months thereafter. Any lesions in the treatment site suspicious for residual tumor were biopsied. Exclusion criteria included tumors greater than 4 cm in diameter or non-movable tumors adherent to deeper structures.

**RESULTS** - Follow-up ranged from 0-63months. At a mean follow up of 16 months, 28 patients with 74 lesions expired, all without recurrence. Tumor Cure rates at 1,2 and 5 years were 99.56%, 99.42% and 99.42% respectively. One,2 and 5 year Overall-Survival (OS) for the entire group was 97.80%, 94.71% and 84.40% and unaffected by disease status or treatment.

**CONCLUSION** – To date, this is the largest study of NMSC treated with IGSRT. It shows 99% cure rate which is comparable to the cure rates of Mohs micrographic surgery. This study demonstrates IGSRT has the highest non-surgical cure rate for treatment of NMSC. This innovative non-surgical technology with its high cure rate in the treatment of NMSC has the potential to transform the practice of dermatology.

References:

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- 3) H Soyer etal, In: J Bologna etal, eds. Dermatology, Vol. 2, 2012