

## عنوان مقاله:

Evidence of decreasing OAR (lungs, ribs, skin) absorption dose by increasing the number of lumen in Breast Brachytherapy Applicators with MCNP

## محل انتشار:

چهاردهمین کنگره بین المللی سرطان پستان (سال: 1397)

تعداد صفحات اصل مقاله: 1

## نویسنده:

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## خلاصه مقاله:

Introduction: Brachytherapy is a type of radiation therapy that is performed by providing a dose using radioactive sources located at the treatment site. Aim: modeling of a common breast cancer treatment applicators called MammoSite and Mammosite-ML is done by the Monte Carlo simulation code. Then, calculate the absorbed dose in the breasts, tumor and OAR: lungs, ribs, skin. Materials and Methods: The MCNPX code is the based on the Monte Carlo method. Mammosite applicator has a central duct but the Mammosite-ML or Contura Applicator model has 3, 4 or 5 additional ducts around the central duct. Results: In Mammosite due to the absorption dose ratio of the right and left breast tissue to the absorbed dose by the target volume, which is numerically equal to 1.035 and 1.033, respectively. In the contura, according to the absorption dose ratio of the right and left breast tissue to the absorbed dose by the target volume, the number is 0.69 and 0.67 respectively. Conclusion: the Mammosite applicator was unable to distribute asymmetric doses. But contura applicator is promising asymmetric dose distribution and higher quality treatment. Research hypothesis suggests that by increasing the number of channels, the ability to produce asymmetric doses increases and the treatment will be better, it s true

## کلمات کلیدی:

brachytherapy, Mammosite, Contura, applicator, breast

## لینک ثابت مقاله در پایگاه سیویلیکا:

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