

Evaluation of Bone Mineral Density in Patients Who Received Brachytherapy Due to Gynecological Malignancy

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Brachytherapy

The placement of the radioactive source inside the body with the help of a catheter and the application of internal radiotherapy through this source.

Advantages over external radiotherapy:

- ▶ Less radiation to surrounding tissues
- ▶ More intense radiation on the tumor
- ▶ Ability to administer higher doses of radiation in a shorter time

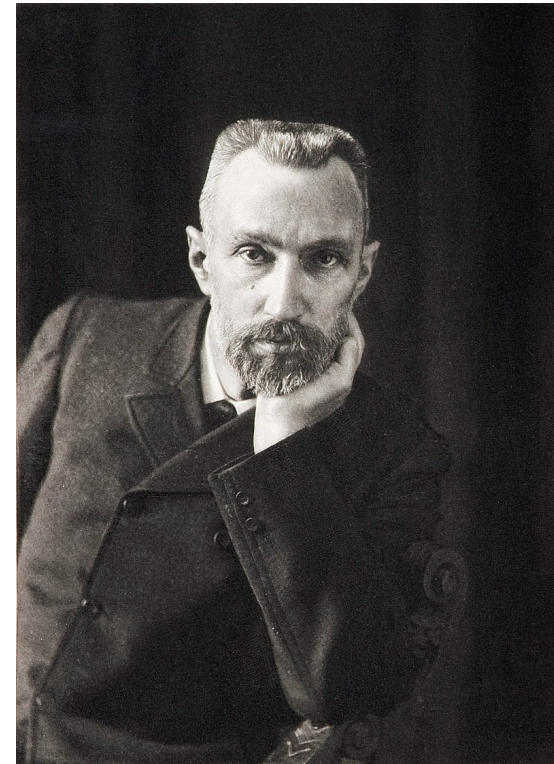


Brachytherapy



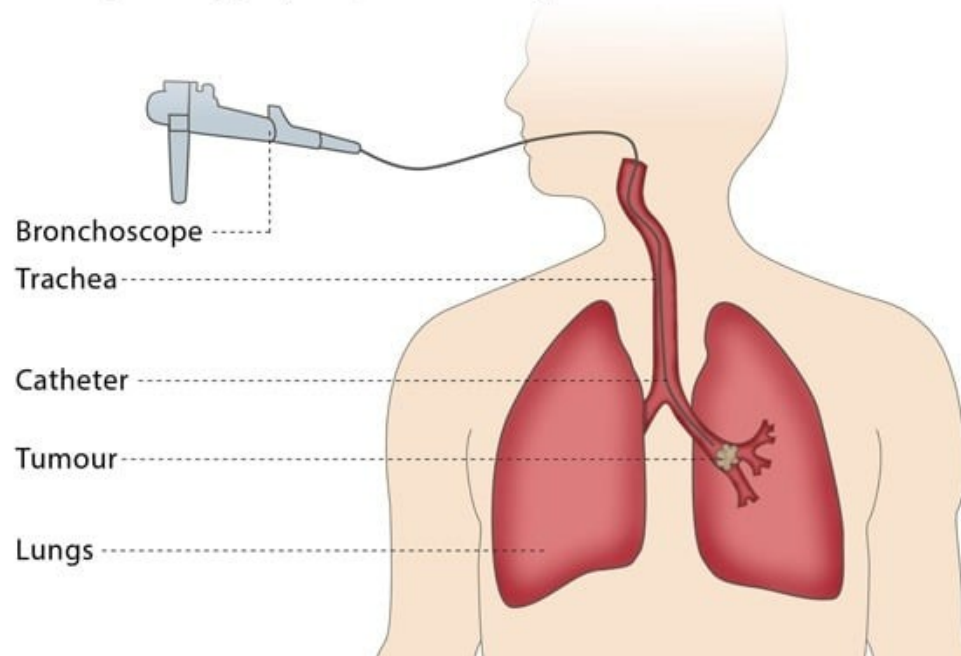
Cancers where brachytherapy can be applied:

- ▶ Prostate
- ▶ Cervix
- ▶ Endometrium
- ▶ Brain
- ▶ Breast
- ▶ Eye
- ▶ Lung
- ▶ Rectal

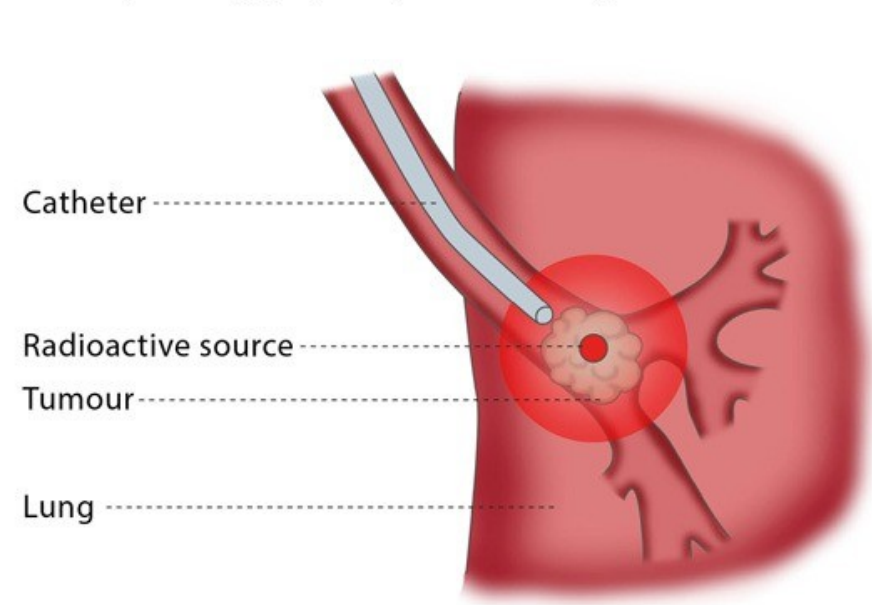


Brachytherapy

Brachytherapy (example in the lung)



Brachytherapy (example in the lung)



Purpose of the Research



The main purpose of this study is to compare the bone mineral density changes of patients who received pelvic brachytherapy treatment due to gynecological cancer compared to the normal population.

We hope that the results of this research will provide a wealth of information on treatment decision-making, selection of patients suitable for treatment, and complications that may occur after treatment.

Research Method

- ▶ Identification of 42 patients who received pelvic brachytherapy with the indication of gynecological cancer (endometrium and cervix)
- ▶ Selecting appropriate patients within the scope of exclusion criteria

Exclusion criteria:

- ❖ Not more than 6 months have passed since therapy
- ❖ Presence of active metastasis
- ❖ Taking postmenopausal HRT
- ❖ Pregnancy
- ❖ Treatment of osteoporosis
- ❖ Pelvic surgery history



Research Method



- ▶ Measuring bone mineral density of patients with the DEXA method
- ▶ Evaluation of bone mineral density with T scoring (L1-L5)



Results



As a result of the data collected from the sample group ($n = 42$), the average age was 60.4, the average T score was -1.098, and no significant decrease due to treatment ($p = 0.221$). For patients younger than 56 years of age ($n = 15$), the mean T score was -0.907 and no significant decrease was detected.

References



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