
XXXIII CONGRESSO NAZIONALE AIRO
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BOLOGNA,
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PALAZZO DEI CONGRESSI
Radioterapia Oncologica: l'evoluzione al servizio dei pazienti
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VARIATION AND DOSIMETRIC CHANGES IN FLETCHER APPLICATOR PLACEMENT FROM IMPLANT TO ACTUAL TREATMENT DELIVERY FOR CERVICAL HIGH-DOSE-RATE BRACHYTHERAPY

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AIMS

To quantify dosimetric variation in HRCTV with respect to prescribed dose and the corresponding dosimetric effects on OARs.

METHODS

From August 2022 to April 2023, 12 patients with locally advanced cervical carcinoma were treated with HDR intracavity brachytherapy using Fletcher system with a 6 Gy median dose per fraction (range 5-7 Gy / 3-4 Fx).

RESULTS

36 CBCT have been performed before every fraction and the images were matched to the planning CT. Variations:

- HRCTV 1.15% (range -4.17% to 5%);
- Bladder -2.32% (range -8.83% to 0.14%);
- Rectum -1.32% (range -6.05% to 3.53%);
- Sigmoid colon 2.7% (range -1.03% to 8%);
- Bowel -2.21% (range -11.29% to 7.5%).

CONCLUSIONS

The utilization of CBCT scan and appropriate corrective techniques contribute to accurate applicator placement and precise dose delivery. Further studies involving larger patient cohorts need to validate these results and optimize treatment strategies.