

# Considering cost in new facility and program design for gynecologic brachytherapy; a comparison of treatments for locally advanced cervical cancer

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## INTRODUCTION

- Understanding the resources dedicated to brachytherapy techniques are needed to address their impact on the public healthcare system.
- This work provides a methodology to categorize brachytherapy resources that may be useful to practitioners and hospital administrators.

## PURPOSE

- To assess the financial resources required for brachytherapy treatment options for locally advanced cervical cancer and inform practitioners on program design alternatives in a public healthcare environment

## METHOD

- The resource requirements for two brachytherapy modalities were compared.
  - Applicator interstitial implants
  - Perineal template interstitial implants
- The applicator interstitial implants are delivered by three implants, each separated by a week, as an outpatient procedure
- The perineal template interstitial implants are delivered by a single implant, with three fractions separated by at least 6 hours, with an overnight hospital admission.

## METHOD (CONTINUED)

- Estimated costs were categorized and compared according to the following groups: radiotherapy consumable supplies (needles, guiding tubes, templates), personnel (medical physicist, physician, nursing, radiation therapist), and facilities (patient admission, imaging, surgical). Capital equipment, including the remote afterloader and applicator costs, as part of a standard program were considered equivalent.
- Figure 1 depicts the representative brachytherapy applicators and equipment used to perform the procedures.

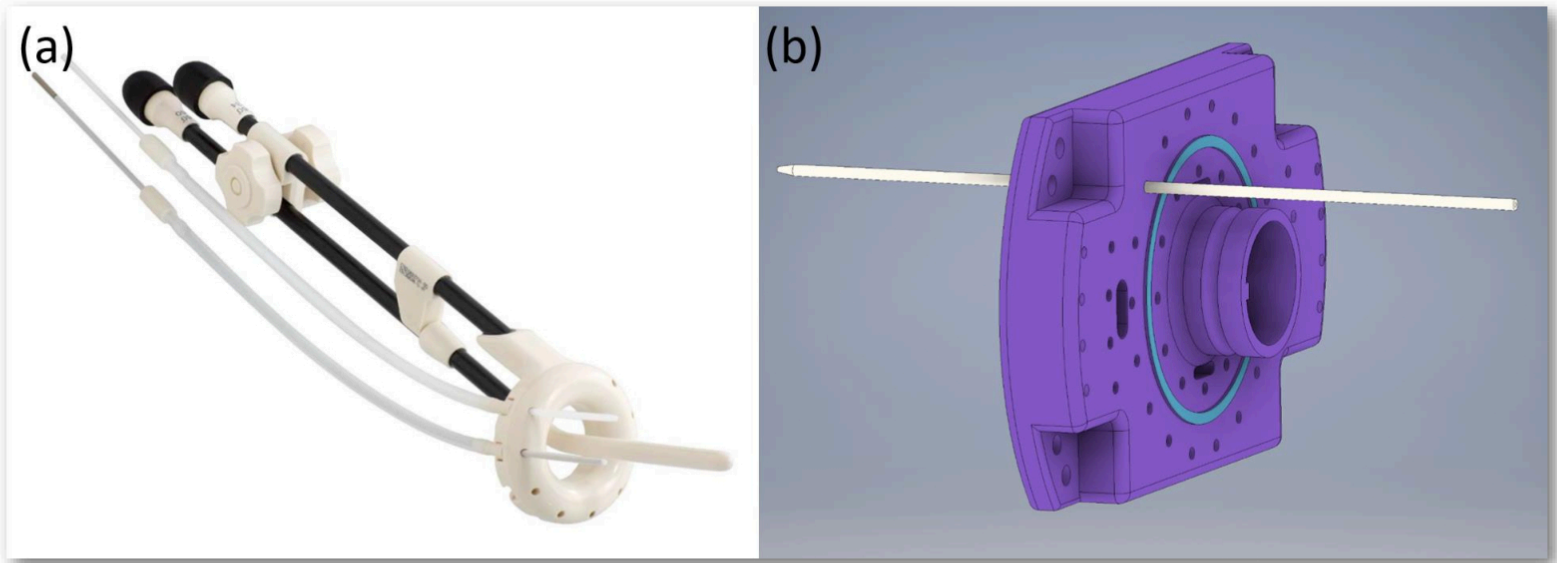


Figure 1(a) is an example of apparatus used for an applicator interstitial implant, and (b) is an example of apparatus used for a perineal template interstitial implant.

## RESULTS

- The cost for each of the techniques is shown in the Table below:

Resource Domain	Applicator Interstitial	Perineal Template Interstitial
Consumable Supplies	\$1,600	\$3,200
Personnel	\$4,100	\$2,100
Facilities	\$7,700	\$6,900
TOTAL	\$13,400	\$12,200

## CONCLUSIONS

- Perineal template interstitial implants are often considered more costly due to the greater utilization of consumable supplies.
- When considering all procedural costs, perineal template interstitial implants are less costly.
- In public healthcare, brachytherapy programs often utilize funds from different resource pools.
- These results may aid practitioners in assessing costs when considering brachytherapy program design and can be used in conjunction with patient outcome data to determine cost effectiveness analysis of the two techniques.

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## CONTACT INFORMATION

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