



# Radiation Oncology Consultants

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## ROC March 2014 Newsletter

### **CAPRI APPLICATOR FOR TREATMENT OF SELECT GYNECOLOGIC MALIGNANCIES**

**Alexian Brothers Medical Center, Central DuPage Hospital, and Advocate Lutheran General Hospital, are three ROC sites that offer Multi-Channel High Dose Rate (HDR) Brachytherapy with a Capri applicator for treatment of select gynecologic malignancies.**

Brachytherapy comes from a Greek word meaning "short-distance". Radiation sources are placed close or within the target region allowing for increased dose to this region with a rapid dose drop off allowing for decreased dose to adjacent normal tissues. Brachytherapy is indicated especially when the target region and the normal structures are in close proximity to each other, and a multichannel applicator, such as the Capri applicator, can offer an increased number of properly placed source positions, allowing for more options for increased conformality and better treatment options for select gynecologic malignancies.

Endometrial cancer is treated with a combination of surgery, radiation and chemotherapy. The options for radiation are based on prognostic factors and surgical pathological factors. The treatment of endometrial cancer postoperatively has evolved over time and the roles of external beam radiation and vaginal brachytherapy have been better defined. Vaginal brachytherapy can also be used in certain situations for recurrent endometrial disease within the vagina, vaginal cancers, or extensive vaginal involvement in cervical cancer patients.

## **ENDOMETRIAL CANCER CASE EXAMPLE**

65-year-old female who initially presented with postmenopausal bleeding. The patient underwent a D&C to establish the diagnosis of endometrial cancer. She was referred to a gynecologic oncologist and underwent a daVinci assisted total abdominal hysterectomy and lymph node dissection.

### **Pathological Findings**

Total abdominal hysterectomy and lymph node dissection.

Pathology revealed

- 2 cm, Grade 2, Endometrioid adenocarcinoma.
- No vascular invasion.
- 7 of 12 mm of myometrial invasion.
- No cervical involvement but uterine segment involvement.
- Adequate para-aortic and pelvic lymph node sampling with all negative lymph nodes.

### **Treatment Options**

Treatment options include observation or vaginal brachytherapy and/or external beam pelvic radiation treatment.

Considering the discussion with the gynecologic oncologist and due to additional concern for bowel toxicity the decision was made to proceed with vaginal brachytherapy using Capri applicator.

### **Planning the Treatment**

The CT scanned was performed for radiation treatment planning. Areas of the target region as well as the normal structures were defined and doses to these structures were considered while optimizing the treatment. With physics support the treatment delivery was verified prior to delivery.

### **Treatment**

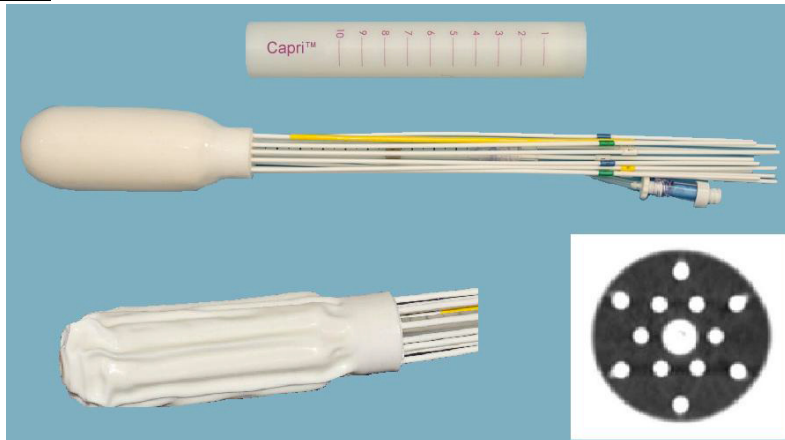
Patient received three fractions delivered twice per week until the treatment was complete. The patients experience no pain during the course of treatment. The actual radiation treatment time is generally 5-15 minutes.

### **Follow-up**

After completing her treatment the patient is given instructions for follow-up. The patient was also given instructions for use of a vaginal dilator to reduce vaginal stenosis and scar tissue formation. The patient will also be provided cancer survivorship information.

The patient will follow-up with her gynecologic oncologist for regular pelvic exams, cytological evaluation of the vaginal cuff, and blood work. Additional exams would be based on clinical symptoms/signs or abnormal findings.

## Capri Applicator



The device is an inflatable multi-lumen catheter, with increased flexibility during treatment planning and increased conformance to the patient's individual anatomy. It contains 13 lumens with a central lumen and two concentric rings, each containing 6 lumens. Multiple lumens allows for flexibility in treatment planning when compared to a vaginal cylinder with a single channel.

### Advantages Of The Capri Applicator

- Lightweight and soft resulting in less discomfort to the patient during treatment.
- Expandable balloon applicator that is inflated to conform to the patient's individual anatomy. Resulting in a more conformal fit.
- Multiple channels allowing patient's plans be unique and resulting in reduced dose to the bladder and rectum while being able to optimize radiation dose to the target region.

### Take Home Points

- Advances in Brachytherapy treatment planning and delivery have allowed for more conformal plans with potential for last dose to adjacent critical structures.
- New devices such as the Capri applicator have also contributed to better plans in patients requiring vaginal brachytherapy.
- Not all vaginal brachytherapy cases need the use of a Capri applicator but it provides us with an additional option for patients that may benefit from its use.

We look forward to continuing to work with all of you on these as well as other cases. If you have further questions regarding this particular device or other treatment modalities we offer please contact one of us as listed below.

### Contact Us

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