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## **ASTRO issues guideline on the role of postoperative radiation therapy for endometrial cancer**

Fairfax, Va., April 23, 2014— The American Society for Radiation Oncology (ASTRO) has issued a new guideline, “The Role of Postoperative Radiation Therapy for Endometrial Cancer: An ASTRO Evidence-Based Guideline,” that details the use of adjuvant radiation therapy in the treatment of endometrial cancer. The guideline’s executive summary is published in the May-June 2014 issue of *Practical Radiation Oncology (PRO)*, the official clinical practice journal of ASTRO. The full-length guideline is available as an open-access article online at [www.practicalradonc.org](http://www.practicalradonc.org).

ASTRO’s Guidelines Panel of 17 leading gynecologic specialists compiled and reviewed extensive data from 330 studies from MEDLINE, EMBASE and the Specialized Register of the Cochrane Gynaecological Cancer Review Group published from 1980 to 2011. The data population selected for the guideline was defined as women of all races, age 18 or older, with stage I-IV endometrial cancer of any histologic type or grade. The studies included patients who underwent a hysterectomy followed by no adjuvant therapy, or pelvic and/or vaginal brachytherapy with or without systemic chemotherapy. The panel identified five key questions about the role of adjuvant radiation therapy and developed a series of recommendations to address each question.

The first Key Question addresses which patients with endometrioid endometrial cancer require no additional therapy after hysterectomy. For patients with no residual disease in the hysterectomy specimen despite positive biopsy or grade 1 or 2 cancers with either no invasion or <50

percent myometrial invasion, especially when no other high-risk features are present, no adjuvant radiation therapy is a reasonable option. Patients with grade 3 cancers without myometrial invasion or grade 1 or 2 cancers with <50 percent myometrial invasion and higher risk factors such as age >60 and/or lymphovascular space invasion could reasonably be treated with or without vaginal cuff brachytherapy.

Key Question 2 examines which patients with endometrioid endometrial cancer should receive vaginal cuff radiation. Evidence demonstrates that cuff brachytherapy is as effective as pelvic radiation therapy at preventing vaginal recurrence for patients with 1) grade 1 or 2 cancers with  $\geq 50$  percent myometrial invasion or 2) grade 3 tumors with <50 percent myometrial invasion. Vaginal cuff brachytherapy is preferred to pelvic radiation in patients with these risk factors particularly in patients who have had comprehensive nodal assessment.

Key Question 3 details which women should receive postoperative external beam radiation. Patients with early stage endometrial cancer which is grade 3 with  $\geq 50$  percent myometrial invasion or cervical stroma invasion are felt to benefit from pelvic radiation to reduce the risk of pelvic recurrence. Patients with grade 1 or 2 tumors with  $\geq 50$  percent myometrial invasion may also benefit from pelvic radiation to reduce pelvic recurrence rates if other risk factors are presents such as age >60 years and/or lymphovascular space invasion. For patients with positive nodes or involved uterine serosa, ovaries/fallopian tubes, vagina, bladder or rectum, the best available evidence suggests that treatment should include external beam radiation therapy as well as adjuvant chemotherapy. Chemotherapy or radiation therapy alone may be considered for some patients based on pathologic risk factors for pelvic recurrence.

Key Question 4 addresses when brachytherapy should be used in addition to external beam radiation. The panel noted that data is lacking to validate the use of brachytherapy after pelvic radiation and that retrospective studies show little conclusive evidence of a benefit, albeit with small patient numbers. Use of vaginal brachytherapy in patients also undergoing pelvic external beam radiation may not generally be warranted, unless risk factors for vaginal recurrence are present.

Key Question 5 examines how radiation therapy and chemotherapy should be integrated in the management of endometrial cancer. The panel concluded that the best available evidence suggests that concurrent chemoradiation followed by adjuvant chemotherapy is indicated for patients with positive nodes or involved uterine serosa, ovaries/fallopian tubes, vagina, bladder or rectum. Alternative sequencing strategies with external beam radiation and chemotherapy are also acceptable. Chemotherapy or radiation therapy alone may be considered for some patients based on pathologic risk factors for pelvic recurrence.

“Several trials on the role of radiation therapy in endometrial cancer have been reported in the past five years, seeking to clarify this topic; however these trials have been interpreted in different ways, leading to inconsistent treatment recommendations,” said Ann Klopp, MD, PhD, and Akila N. Viswanathan, MD, MPH, co-chairs of the ASTRO Endometrial Guideline Panel. “This guideline provides recommendations to help ensure patients receive the best possible care and to help patients and doctors make informed decisions about treatment options.”

The guideline was approved by ASTRO’s Board of Directors in September 2013 and is endorsed by the Society of Gynecologic Oncology. The guideline panel members included radiation oncologists, gynecologic oncologists, medical oncologists, a resident in radiation oncology and radiation physicists: Dr. Klopp (co-chair), Dr. Viswanathan (co-chair), Benjamin D. Smith, MD, Kaled Alektiar, MD, Alvin Cabrera, MD, Antonio L. Damato, PhD, Beth Erickson, MD, FASTRO, Gini Fleming, MD, David Gaffney, MD, PhD, Kathryn Greven, MD, FASTRO, Karen Lu, MD, David Miller, MD, David Moore, MD, Daniel Peterreit, MD, Tracey Schefter, MD, William Small Jr., MD, FASTRO, and Catheryn Yashar, MD.

For the executive summary and full guideline, visit

[www.practicalradonc.org/article/PIIS1879850014000058/fulltext](http://www.practicalradonc.org/article/PIIS1879850014000058/fulltext).

## **ABOUT ASTRO**

*ASTRO is the premier radiation oncology society in the world, with more than 10,000 members who are physicians, nurses, biologists, physicists, radiation therapists, dosimetrists and other health care professionals*

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*that specialize in treating patients with radiation therapies. As the leading organization in radiation oncology, the Society is dedicated to improving patient care through professional education and training, support for clinical practice and health policy standards, advancement of science and research, and advocacy. ASTRO publishes two medical journals, International Journal of Radiation Oncology • Biology • Physics ([www.redjournal.org](http://www.redjournal.org)) and Practical Radiation Oncology ([www.practicalradonc.org](http://www.practicalradonc.org)); developed and maintains an extensive patient website, [www.rtanswers.org](http://www.rtanswers.org); and created the Radiation Oncology Institute ([www.roinstitute.org](http://www.roinstitute.org)), a non-profit foundation to support research and education efforts around the world that enhance and confirm the critical role of radiation therapy in improving cancer treatment. To learn more about ASTRO, visit [www.astro.org](http://www.astro.org).*

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