

Cisplatin combined with high-dose brachytherapy for advanced cervical cancer may be more beneficial

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Adding the chemotherapy drug cisplatin to a treatment plan of radiation therapy (RT) and high-dose-rate brachytherapy (HDRB) for stage IIIB cervical cancer is beneficial, according to research presented today at the American Society for Radiation Oncology's (ASTRO's) 55th Annual Meeting. The study also indicated that the combined treatments produced acceptable levels of toxicity.

The randomized, controlled trial studied a total of 147 women in Brazil with stage IIIB squamous cell [cervical cancer](#). A stage IIIB classification indicates that the cancer has spread to the pelvic wall and/or the tumor has become large enough to affect [kidney function](#). Each patient received [external beam radiation](#) of 45 Gy to the pelvic region in 25 fractions; 14.4 Gy boost to the compromised parametrium (the connective tissue and fat adjacent to the uterus); and HDRB in the amount of four weekly fractions of 7 Gy prescribed to point A (the crossing of the [uterine artery](#) and the ureter).

Seventy-five patients received only RT and HDRB treatment—the RT group, and 72 patients received RT and HDRB plus weekly intravenous doses of 40 mg/m² of cisplatin during the pelvic radiotherapy sessions—the CHRT group. [Note: Some chemotherapy doses were determined based on body surface area (BSA), which doctors calculate using a patient's height and weight. BSA is expressed in meters squared (m²)]. The research was conducted from 2003 through 2010, with

follow-up lasting until January 2013.

Kaplan-Meier survival curves were performed comparing the five-year, disease-free survival (DFS) and the overall survival (OS) of the RT and CHRT groups. Differences in survival were assessed utilizing the log-rank test. Patients in the CHRT group had significantly better DFS (Hazard Ratio (HR)=0.52, 95 percent Confidence Interval (CI) 0.28 to 0.98; $p=0.04$) and had a better OS, but without statistical significance (HR=0.67, 95 percent CI 0.37 to 1.183; $p=0.16$).

Toxicity levels, measured utilizing the Cooperative Group Common Toxicity Criteria of the Radiation Therapy Oncology Group, in the CHRT group were similar to those in the RT group, with grades 1 and 2 acute [toxicity](#) at 37.5 percent for CHRT group, and 28 percent for RT group ($p=0.29$). Late toxicity grades 3 and 4 were 9.7 percent for the CHRT and 3 percent for the RT group ($p=0.29$).

"In testing a new approach of chemotherapy with traditional external beam [radiation therapy](#) and high-dose-rate brachytherapy, we were extremely cautious about possible toxicity for the patients," said Antonio Zuliani, MD, lead author of the study and a radiation oncologist at Campinas State University in Campinas, Brazil. "We were pleased by an increase in local control and the very low toxicity rates. We believe that these results demonstrate that this combined treatment protocol is safe to offer to patients and provides some beneficial improvements—in disease-free survival and [toxicity levels](#)."

More information: The abstract, "Efficacy of Concomitant Cisplatin Plus Radiotherapy and High Dose Rate Brachytherapy versus Radiotherapy Alone for Stage IIIB Epidermoid Cervical Cancer: A Ten-Year Randomized Controlled Trial," will be presented in detail during a scientific session at ASTRO's 55th Annual Meeting at 1:45 p.m. Eastern time on September 22, 2013.

Provided by American Society for Radiation Oncology

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