

## Analysis of postoperative radiotherapy effects within risk groups in patients with FIGO I, II, and III endometrial cancer

[Vladan Popovic](#)<sup>1</sup>, [Neda Milosavljevic](#)<sup>1</sup>, [Marija Zivkovic Radojevic](#)<sup>2</sup>, [Radisa H Vojinovic](#)<sup>3</sup>, [Nikola Nedovic](#)<sup>4</sup>, [Slobodanka Mitrovic](#)<sup>5</sup>, [Jasmina Nedovic](#)<sup>1</sup>, [Aleksandar Tomasevic](#)<sup>6</sup>

<sup>1</sup> Center for Oncology and Radiology, Clinical Center Kragujevac, Kragujevac, Serbia

<sup>2</sup> Center for Oncology and Radiology, Clinical Center Kragujevac; University of Kragujevac, Faculty of Medical Sciences, Kragujevac, Serbia

<sup>3</sup> University of Kragujevac, Faculty of Medical Sciences; Department for Radiology, Clinical Center Kragujevac, Kragujevac, Serbia

<sup>4</sup> University of Kragujevac, Faculty of Medical Sciences, Kragujevac, Serbia

<sup>5</sup> University of Kragujevac, Faculty of Medical Sciences; Department for Pathology, Clinical Center Kragujevac, Kragujevac, Serbia

<sup>6</sup> Department of Brachytherapy, Institute for Oncology and Radiology, Belgrade, Serbia

Date of Web Publication 11-Oct-2019

Correspondence Address:

Marija Zivkovic Radojevic

Center for Oncology and Radiology, Clinical Center Kragujevac; University of Kragujevac, Faculty of Medical Sciences, Kragujevac

Serbia

### Abstract

**INTRODUCTION:** To define indications for adjuvant radiotherapy in patients with endometrial cancer, the risk groups have been established according to clinical and pathological prognostic factors. The purpose was to determine precise criteria for adjuvant radiotherapy and identify patients with increased risk for disease relapse who may benefit from postoperative radiotherapy, with an acceptable level of toxicity.

**MATERIALS AND METHODS:** A retrospective study was conducted at the Department of Oncology and Radiology, Kragujevac, during a 5-year period. A group of 80 patients with endometrial cancer treated with adjuvant radiotherapy were included in the study. Patients were divided into four risk groups according to ESMO-ESGO-ESTRO Consensus Conference classification. The Kaplan-Meier method was used for overall and progression-free survival. A statistical analysis was performed using SPSS 20.0 statistical software.

**RESULTS:** The 5-year survival rate was 80%, and 66.3% patients were progression-free during this period. Fatal outcome occurred in 20% of patients. The results showed survival was shortest in patients from the high-risk group. Factors that had impact on the 5-year survival were comorbidities, FIGO stage, postoperative radiotherapy, organ site of late toxicity, and localization of metastases. The analysis of postoperative radiotherapy effects showed that 72.5% of patients had no complications. The most common symptoms of late irradiation toxicity arose from the gastrointestinal tract. Toxicity was usually moderate.

**CONCLUSIONS:** Adjuvant radiotherapy can potentially prolong survival and prevent recurrence, with acceptable level of toxicity, to preserve patient's quality of life. Patient classification into appropriate risk groups allows for adjuvant treatment individualization.

Keywords: Adjuvant radiotherapy, endometrial carcinoma, radiotherapy effects