Objective
We assessed the impact of radiotherapy on survival of patients with early stage endometrial cancer, for whom the usefulness of external radiotherapy is still controversial (1-3).

Patients and methods:
We considered all patients operated for endometrial cancer confined to the uterine cavity (stage Ia) recorded between 1980-1999 at the Geneva Cancer Registry.

Results
Table 1 describes the demographic, tumour and treatment characteristics of the 270 patients according to the type of radiotherapy. 87 (32%) women received only brachytherapy, 94 (35%) women received only external radiotherapy, and 89 (33%) women received both the procedures. The proportion of patients who received only radiotherapy increased over the study period: between 1980-87 23% were not irradiated versus 40% between 1987-96. The proportion of patients treated with brachytherapy decreased from 43% to 28% and the proportion of patients treated with external radiotherapy remained relatively stable. Patients treated in the private clinics were less often irradiated, while patients treated in the public hospitals received more frequently external radiotherapy. This study population included 162 (51%) patients in the low risk category and 108 in the high risk category.

Figure 1 presents the five-year overall survival curves according to type of radiotherapy. For non-irradiated patients, the overall 5-year survival rate was 87% (95%CI 80-94%) and for patients treated with brachytherapy 91% (95%CI 86-97%) and for patients treated with external radiotherapy with or without brachytherapy 84% (95%CI 76-92%). Table 2 shows the disease specific survival rates and mortality risks according to type of radiotherapy, for all patients together and for low and high risk patients separately. All patients together, univariate analysis shows that, neither brachytherapy nor external radiotherapy significantly modified disease specific mortality risks.

Panel A: The risk to die of endometrial cancer, after adjustment for age and tumour profile, was 3.6 fold increased unsignificantly (Hazard ratio 3.6, 95% CI: 1.0-13.4, p=0.0555).

Panel B: In the category of patients with low risk tumours, external radiotherapy significantly increased the risk to die of endometrial cancer (multi-adjusted Hazard ratio 9.4, 95% CI: 1.9-86.7).

Panel C: For high risk patients, neither external radiotherapy nor brachytherapy modified the disease specific mortality risk. Compared to non-irradiated patients, those treated with brachytherapy were at similar risk to die of endometrial cancer. External radiotherapy did not significantly modify the risk to die from endometrial cancer.

Table 2 Risk of death from endometrial cancer according to type of radiotherapy (Panel A, B, C)

Table 1 Patient and tumour characteristics of women with endometrial cancer according to type of adjuvant therapy

Figure 1: Overall survival curves for all the patients studied according to type of radiotherapy.