DNA replication and repair pathway. By performing co-immunoprecipitation, reduced interaction of p110α with ATR was found in cervical cancer cells with PIK3CA mutations, which made them sensitive to the combination of Alpelisib and cisplatin in vivo. Furthermore, we found that Alpelisib significantly suppressed tumor proliferation and migration in cervical carcinoma cells via inhibiting the AKT/mTOR pathway.

Conclusion Our study provides insights into the molecular characteristics between SCC and CaDc and identifies Alpelisib as a therapeutic option for PIK3CA mutational cervical carcinoma.

Introduction/Background At present, there is no international consensus for management of early-stage cervical cancer (ESCC). This study aimed to retrospectively investigate disease-free survival (DFS) and overall survival (OS) in patients with ESCC according to the therapeutic strategy used, surgery alone versus pre-operative radiotherapy following by surgery.

Methodology Data from patients with ESCC were retrospectively collected from January 1998 to December 2015 using the Breast & Gynecological Cancer Registry of the Côte d’Or, regrouping data from 7 centers. The inclusion criteria were: FIGO 2009 IB1 or lower; epidermoid, adenocarcinoma or adenosquamous type. The exclusion criteria were: history of pelvic radiation; concomitant radiochemotherapy; adjuvant radiotherapy. In the surgery group, patients had only a surgical treatment (hysterectomy, trachelectomy or conization). In the radiation group; patients had radiotherapy, brachytherapy and/or radiotherapy followed by surgery. DFS and OS were determined using the Kaplan-Meier method. Survival curves were compared using the log-rank test.

Results A total of 126 patients were included. Median survival was 90 months (47–148); 72 months for the surgery group, and 135.5 months for the radiation group. There was no significant difference in DFS between groups (HR=2.82, 95%CI [0.82–9.65], p=0.08). Similarly, there was no significant difference in OS between groups (HR=1.35, 95%CI [0.6–3.05], p=0.5). In the sub-group of patients with stage IB1 (FIGO 2009), there was no significant difference in DFS (HR=3.26, 95%CI [0.4–26.76], p=0.2) or in OS (HR=3.87, 95%CI [0.49–30.35], p=0.2).

Conclusion Cervical cancer counts among the only solid tumors for which increasing mortality has been observed in recent years. Radiation therapy is still a major source of morbidity for young patients. Therefore, key issues remain outstanding for the future management of young patients with cervical cancer and include reducing the morbidity of existing therapeutic options by identifying subgroups of patients at low or intermediate risk, and facilitating fertility-sparing surgery.