Prevalence of p53 mutation in low-risk endometrial cancer

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ABSTRACT

Introduction: Endometrial cancer mostly comes in early stage that represents favorable outcome. However, recent findings found that molecular profiles significantly correlate with prognosis. Therefore, special consideration may be needed in low-risk endometrial cancer to get timely adjuvant treatment. Mutation of p53 plays an important role in cell cycle progression, thereby the mutation needs consideration to cancer progression. **Materials and Methods:** We performed immunohistochemical staining to define p53 mutation in 84 endometrial cancer patients. The examination of immunohistochemistry was based on percentage and intensity of cellular staining. In addition, longitudinal evaluation of the staining status was compared with survival and clinical profiles (histotype, stage, grade, age at diagnosis, resectability, recurrence). **Results:** We found that p53 mutation might be seen in nucleus or cytoplasm. Strong expression in nucleus highly indicated p53 mutation. The prevalence of p53 mutation in low-risk endometrial cancer was 19.05%. Moreover, low risk patients with p53 mutation were more like to have recurrence and adjuvant therapy. **Conclusion:** Reconsideration of low-risk endometrial cancer based on molecular profiling may provide better therapeutic strategy. Mutation of p53 may be further applied in low-risk endometrial cancer to define the needs of adjuvant treatment.

Keywords: Endometrial cancer, p53 mutation, risk stratification, diagnosis