Management of Adenocarcinoma in situ of the Cervix (AIS)

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Adenocarcinoma in situ (AIS) is an HPV-associated precancerous lesion of the glandular cells of the endocervix and the precursor to endocervical adenocarcinoma.

Initial Management

If AIS is identified on a colposcopic biopsy, in the absence of a visible mass concerning for invasive cancer, the next step is a diagnostic excisional procedure. If there is a visible mass concerning for malignancy, an office cervical biopsy should be performed at the time of the exam. The goal of the excisional procedure is to exclude invasive disease and assess extent of disease. As there is a 15% risk of concurrent cancer with a colposcopic biopsy showing AIS, this step is essential even in patients where future hysterectomy is planned to avoid undertreating invasive malignancy.

Ideally, the excisional procedure is a single, intact specimen to avoid ambiguity of margins. While a LEEP or cold knife cone biopsy is acceptable, performing a separate "top hat" on a LEEP is not recommended. Given that AIS arises in the endocervical canal, a cone biopsy may more easily achieve an unfragmented specimen with the desired depth for evaluation of least a 10mm length. In patients not desiring future fertility, extending this to 18-20mm is preferred. An endocervical curettage (ECC) should be done after removing the excisional specimen, to evaluate the remaining endocervical canal.

If the excisional biopsy confirms AIS with negative margins and without invasive disease, simple hysterectomy is the next step for patients who have completed childbearing. If margins are positive, re-excision to achieve negative margins is preferred to further rule out invasive cancer and reduce risk of recurrence, as the risk of residual or recurrent AIS increases with positive margins. If repeat excision is not feasible, it is acceptable to either proceed with simple hysterectomy or modified radical hysterectomy. A diagnosis of invasive cancer on the final pathology may require further treatment.

Management of Patients Desiring Future Fertility

For patients who desire future pregnancy, it is acceptable to defer hysterectomy if they have undergone an excisional procedure with negative margins and negative ECC. They must be well-counseled on associated risks and willing to follow surveillance guidelines.

Follow up and Surveillance

For patients who have undergone hysterectomy for AIS, follow up includes HPV-based testing annually for 3 years and then at 3-year intervals for at least 25 years.

For women undergoing fertility sparing management, co-testing with endocervical sampling and HPV testing every 6 months is recommended for 3 years. They can then move to annual surveillance for 2 years or until hysterectomy is performed. If there are any abnormal test results within this period, the patient should be managed per guidelines. If hysterectomy is not performed but all testing has been negative for 5 years, it is reasonable to space out surveillance to every 3 years. Limited data supports that HPV results are more predictive of recurrence than cytology, so if HPV testing continues to be negative, hysterectomy can be avoided. If HPV results in surveillance are positive, the patient should proceed to hysterectomy once childbearing is complete.

References

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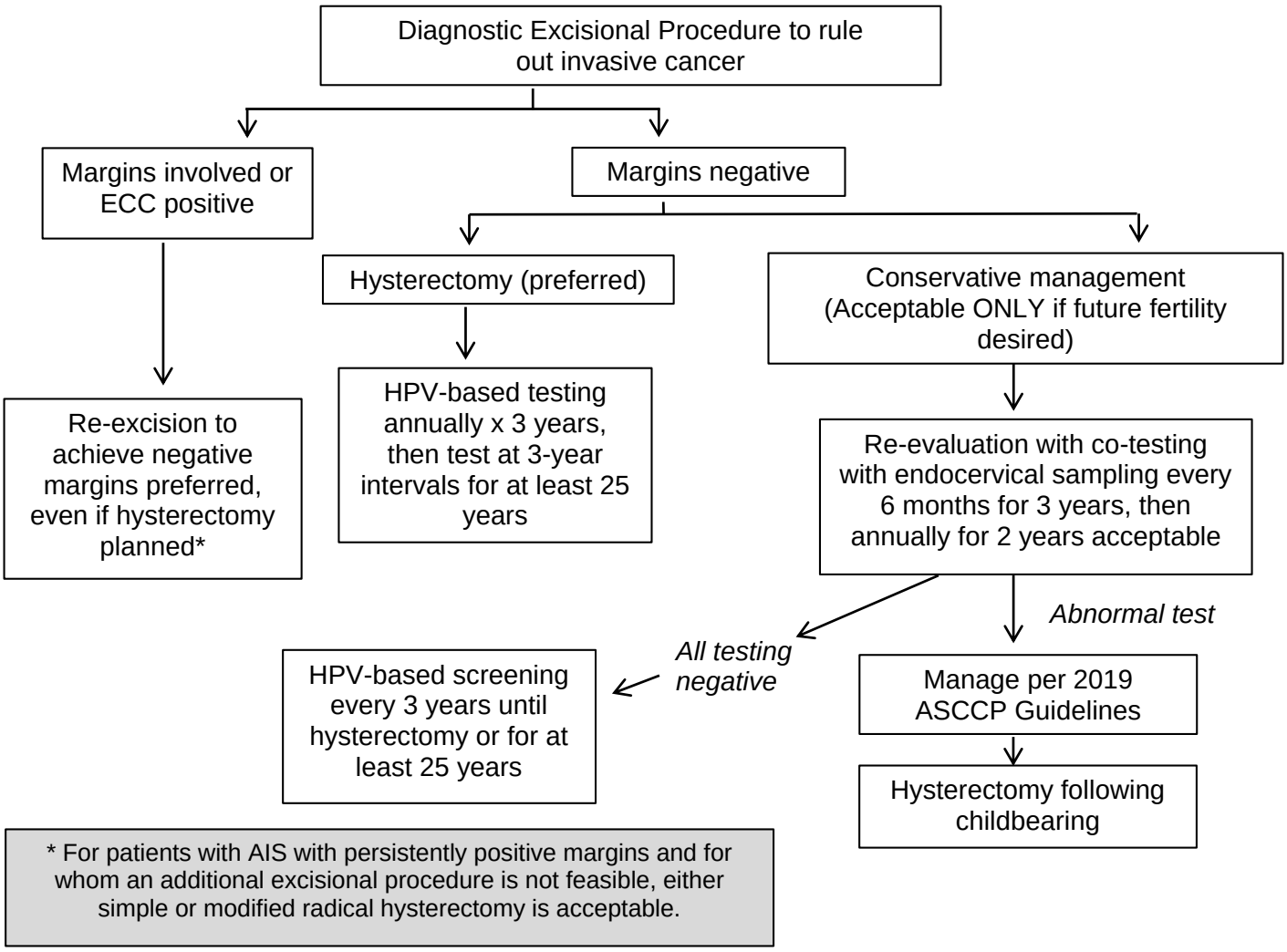

Figure 1. Management of AIS (adapted from Figure 11 of Perkins et al, 2019 ASCCP Risk-Based Management Consensus Guidelines for Abnormal Cervical Cancer Screening Tests and Cancer Precursors)