## Margin status (Required and Recommended)

## **Reason/Evidentiary Support**

The status of all surgical resection margins should be recorded (ectocervical, endocervical, radial/deep stromal and vaginal cuff). At the time of specimen grossing, it may be useful to ink the various resection margins with different colours to assist precise margin recognition.

The recording of margin involvement by tumour is a REQUIRED data element. When invasive carcinoma is close to a surgical margin, documentation of the distance to the margin is RECOMMENDED. No data are available to indicate the optimal margin of clearance of carcinoma in simple hysterectomy, trachelectomy, cone or loop biopsy specimens. Consistent recording of the distance to the margins will enable data to be collected prospectively and provide evidence for future practice. A small number of retrospective studies has assessed the impact of close margins on local and overall recurrence in patients undergoing radical hysterectomy for cervical cancer.<sup>1</sup> The crude local recurrence rate was 20% in 284 patients with FIGO stage IB carcinomas with 'close' margins, defined as a clearance of ≥1 cm, had a crude recurrence rate of 11%. Another study of close surgical margins, defined as ≤5 mm, were associated with recurrence rates of 24% as compared with recurrence rates of only 9% in patients with negative margins. In the same study, close surgical margins were significantly associated with positive lymph nodes, parametrial involvement, larger tumour size, deeper stromal invasion and lymphovascular invasion.

In occasional cases where tumour involvement of the margin cannot be determined for various reasons (processing artifact, multiple pieces or poor tissue orientation), the margin status should be specified as "cannot be assessed" and the reason explained. In hysterectomy or trachelectomy specimens, the lateral radial margin may consist of parametrial soft tissue, which should be measured (see section on **SPECIMEN DIMENSIONS**), based on gross examination, and calculated into the margin evaluation. In contrast, anterior and posterior radial/deep stromal margins in a hysterectomy specimen will consist of cervical stromal tissue.

The presence of margin involvement by HSIL, AIS or SMILE should be documented (REQUIRED element); if not involved, the distance to the resection margin is a RECOMMENDED element, although, as with invasive tumour, there are no data available to indicate the optimal margin of clearance. In hysterectomy specimens with stage IA or small IB carcinomas, the entire cervix should be assessed histologically to ensure an accurate measurement of the extent of the disease and surgical margins.<sup>4-7</sup>

## References

- 1 Khanna N, Rauh LA, Lachiewicz MP and Horowitz IR (2016). Margins for Cervical and Vulvar Cancer. *J Surg Oncol* 113:304-309.
- Viswanathan AN, Lee H, Hanson E, Berkowitz RS and Crum CP (2006). Influence of margin status and radiation on recurrence after radical hysterectomy in Stage IB cervical cancer. *Int. J. Radiation Oncology Biol. Phys* 65(5):1501-1507.
- 3 McCann GA, Taege SK, Boutsicaris CE, Phillips GS, Eisenhauer EL, Fowler JM, O'Malley DM, Copeland LJ, Cohn DE and Salani R (2013). The impact of close surgical margins after radical hysterectomy for early-stage cervical cancer. *Gynecol Oncol.* 128(1):44-48.
- 4 Tanquay C, Plante M, Renauld M-C, Roy M and Tetu B (2004). Vaginal radical trachelectomy in the treatment of cervical cancer: the role of frozen section. *Int J Gynecol Pathol* 23:170-175.
- 5 Andikyan V, Khoury-Collado F, Denesopolis J, Park KJ, Hussein YR, Brown CL, Sonoda Y, Chi DS, Barakat RR and Abu-Rustum NR (2014). Cervical conization and sentinel lymph node mapping in the treatment of stage I cervical cancer: is less enough? *Int J Gynecol Cancer* 24(1):113-117.

Tierney KE, Lin PS, Amezcua C, Matsuo K, Ye W, Felix JC and Roman LD (2014). Cervical conization of adenocarcinoma in situ: a predicting model of residual disease. *Am J Obstet Gynecol* 210(4):366.e361-365.

6

7

Lea JS, Shin CH, Sheets EE, Coleman RL, Gehrig PA, Duska LR, Miller DS and Schorge JO (2002). Endocervical curettage at conization to predict residual cervical adenocarcinoma in situ. *Gynecol Oncol* 87(1):129-132.