### Surgical margin status (Core)

#### **Reason/Evidentiary Support:**

Completeness of resection is not only an important prognostic factor, but also influences postoperative management, including decisions about adjuvant therapy.<sup>1</sup> The status of the surgical resection margin(s) should be reported for all resections, but the number and types of margins varies according to the specimen received. For wedge resections, the only resection margin is the parenchymal margin, which is represented by the staple line. Larger resections may include parenchymal margins (e.g. lobectomies from patients with incomplete fissures) in addition to bronchial and vascular margins. Depending on the anatomy and extent of resection, these may be singular (one bronchial margin and one vascular margin composed of an arterial and venous margin) or multiple.

A positive bronchial or vascular margin is widely considered to represent tumour within the lumen that is densely adherent to and/or involving the wall. According to several studies, tumour restricted to the peribronchial or perivascular soft tissue at the margin or the presence of lymphatic permeation alone at the margin is also prognostically important.<sup>2-5</sup> Recently, however, the significance of peribronchial soft tissue involvement without mucosal involvement has been called into question.<sup>6</sup> Data on the impact of intraluminal tumour alone at the margin are too limited to draw meaningful conclusions. When reporting the presence of tumour at the bronchial or vascular margin, the pathologist should delineate the nature of the involvement.

The significance of carcinoma in situ (CIS) at the bronchial margin remains unresolved due to its rare occurrence.<sup>7</sup> Results of several studies suggest the presence of CIS at the margin is not an independent prognostic factor.<sup>7,8</sup> Nevertheless, it is important to report CIS at the margin so that additional data might permit a more conclusive assessment of its role in prognosis.

En bloc resections contain additional margins (e.g. rib, chest wall soft tissue), the nature of which is dependent on the type and extent of extrapulmonary structures resected. Ideally, the surgeon will designate the location of the resection margin(s) of extrapulmonary structures prior to submission of the specimen, but in ambiguous cases, direct communication will help to ensure appropriate handling and submission of tissue for histopathologic examination. The status of additional margin(s) and their location(s) should be specified in the pathology report.

#### References

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