

## Margin status (Core and Non-core)

The margin status of a surgical resection for thyroid carcinoma is a core element and can be divided into three categories: a R0 resection (microscopically negative margin), a R1 resection (grossly complete resection with microscopically positive margin), and a R2 resection (grossly positive margin or incomplete resection).<sup>1</sup> The macroscopic status of the margins should be communicated to the pathologist by the operating surgeon. Histologically, a positive margin is defined by the presence of tumour cells at the inked tissue border and/or the outer aspect of the thyroid gland.<sup>2-5</sup> Several recent studies have shown that microscopically positive margin is not an independent predictor for recurrence and disease free survival, especially after adjusting for tumour stage and extrathyroidal extension (ETE).<sup>3-5</sup> Taken these into consideration, the current American Thyroid Association (ATA) guideline has only included incomplete R2 resection into the risk stratification as a feature of high risk lesions.<sup>6</sup> In contrast, the National Comprehensive Cancer Network (NCCN) 2019 guideline has included any positive resection margin as one of the criteria to recommend completion thyroidectomy.<sup>7</sup> Lang et al (2016) have shown that a microscopic positive posterior margin is an independent predictor for recurrence free survival with a 23-fold risk of recurrence, while a positive anterior margin did not pose a significant risk for recurrence.<sup>3</sup> However, studies are scant on the prognostic effect of the positive margin location, hence, this is non-core. Nevertheless, we encourage pathologists to ink the anterior and posterior margins differently when processing thyroid specimens and document the status of anterior and posterior margins separately in the pathology report. There is no data to date on the prognostic value of close margins as an independent or co-variable. Therefore, reporting distance of tumour to margin is non-core.

## References

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