Immunohistochemical principles:
The technical test approach – pre-analytical phase
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Immunohistochemistry is routine in surgical pathology and is commonly requested to diagnose a cell type or organism, as well as being used to direct further treatment, and in some malignancies, a role as a prognostic marker. Pathologists must therefore be familiar with the potential technical and interpretive pitfalls that can occur. Pre-analytical variables that affect immunostaining include tissue type, tissue fixation time, type of fixative used, duration, temperature, and pH of fixation, tissue processing, tissue necrosis/preservation, and levels of antigen expression in the tissue. Even with the introduction of semi automation immunolabeling procedures can be capricious if the pre analytical variables are not known or factored into antibody optimisation. Understanding the limitations of immunohistochemistry and the causes of false positives and false negative results in immunohistochemistry is essential to ensure high quality service provision to patients especially in the era of quantitative pathology.

References:
