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Tissue microarrays: a new approach for quality control in immunohistochemistry.
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AIMS: To improve the interpretation of immunohistochemistry (IHC) staining results the use of a tissue microarray technique was established in a routine setting.
METHODS: A tissue microarray was constructed by harvesting 600 microm tissue cores from paraffin wax embedded samples available in a routine pathology department. The punches originating from non-tumorous tissue were placed on host paraffin wax blocks. The microarray contained 12 different tissue samples, with a wide antigen profile and a dimension of 3.5 x 3 mm. One section of the multitissue array was placed as an "internal" positive control on each slide of the patient tissue to undergo identical immunohistochemical procedures. RESULTS: Using the tissue microarray technique as a tool for internal quality control, the interpretation of immunohistochemical staining of more than 20 different antigens in routine IHC was improved. The tissue microarray did not influence the staining results in conventional IHC or in different automated IHC settings.

CONCLUSION: The regular use of an institution adapted tissue microarray would be useful for internal positive control in IHC to enable different laboratory demands. Furthermore, this technique improves the evaluation of staining results in IHC.
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Demystified ... Tissue microarray technology
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ABSTRACT
Several "high throughput methods" have been introduced into research and routine laboratories during the past decade. Providing a new approach to the analysis of genomic
alterations and RNA or protein expression patterns, these new techniques generate a plethora of new data in a relatively short time, and promise to deliver clues to the diagnosis
and treatment of human cancer. Along with these revolutionary developments, new tools for
the interpretation of these large sets of data became necessary and are now widely available. Tissue microarray (TMA) technology is one of these new tools. It is based on the
idea of applying miniaturisation and a high throughput approach to the analysis of intact
tissues. The potential and the scientific value of TMAs in modern research have been demonstrated in a logarithmically increasing number of studies. The spectrum for additional applications is widening rapidly, and comprises quality control in histotechnology, longterm tissue banking, and the continuing education of pathologists. This review covers the basic technical aspects of TMA production and discusses the current and potential future applications of TMA technology.