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Colorectal cancer special, part 2

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In this special issue of the Magazine of European Medical Oncology (MEMO) multidisciplinary experts summarize and discuss recent developments and future perspectives of treatment of colorectal cancer spanning from local therapies to molecular pathology and systemic treatment [1, 2].

Given the growing number of therapeutic options and the complexity of treatment planning for patients with colorectal cancer, treatment options and selection has demonstrated incremental improvements. Despite a plethora of promising predictive biomarkers developed, only a small set of marker remains with sufficient evidence to justify routine clinical assessment for treatment selection in colorectal cancer patients. Challenges in finding strong and reliable predictive biomarkers include biological issues inherent to the complexity and redundancy of pathways regulating tumor proliferation, progression, survival and drug metabolism. A more comprehensive profile of biomarkers describing the biological mechanisms, than a single marker is suggested to increase the ability to predict the efficacy and toxicity of a given therapy. Many putative predictive biomarkers have been described in small, limited studies, however, there has to be considerably better validation pursued before any can be thought of as being associated with therapy outcome and therefore incorporated into routine clinical testing. Once a biomarker pattern is identified, standardized techniques will be required for measurements to ensure both inter- and intra-observer reliability. There is intense interest in the elucidation of prognostic and predictive biomarkers in adjuvant colon cancer. While for stage III colon cancer adjuvant chemotherapy has been established as a standard of care, benefit in stage II is a matter of debate. With MSI/dMMR a predictive and prognostic biomarker is already considered for risk stratification in stage II colon cancer in routine clinical practice. Future molecular profiling from liquid biopsy (ctDNA) might even more individualize treatment decisions in adjuvant colon cancer. An integrated, collaborative effort among laboratory scientists, molecular pathologists, clinical oncologists and pharmaceutical companies is critically needed to successfully incorporate mechanism-based predictive biomarkers for CRC therapies into routine practice within the clinical setting.

I hope this issue of MEMO offers you valuable information for routine clinical practice for the purpose of "lifelong learning" and stimulates you for fruitful discussions on treatment of colorectal cancer patients.

Conflict of interest A. Gerger declares that he has no competing interests.

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