PERSONALIZED MEDICINE IN THE MANAGEMENT OF COLORECTAL CANCER

by Barry Stein, President, Colorectal Cancer Association of Canada

Personalized or precision medicine, while still in its infancy, is beginning to be used in the realm of cancer treatment. In colorectal cancer, knowledge of a patient’s genetic makeup is driving the selection of the most effective therapies, holding out the promise to physicians and patients that they will be able to detect cancer earlier and ultimately improve outcomes.

Certain approved monoclonal antibodies already form part of the standard of care today and we have recently begun to define which patients benefit from these therapies using predictive tumour biomarkers. In the coming years, we will see an influx of new therapies, leading to further prolongation of patient lives and, for some, a cure. As the field continues to evolve, next-generation sequencing will play a large role in identifying patients who will benefit from these new therapies.

Personalized medicine will help form the basis for a holistic, individualized approach to the management of the disease, by taking into account their personal genetic profile, anticipating health problems so as to take preventative measures, predicting appropriate treatments in order to avoid drug reactions, and empowering patients to participate in their care and promote their wellbeing.

In November 2013, the Colorectal Cancer Association of Canada convened a meeting of researchers, industry representatives, regulatory authorities, healthcare management organizations, physicians, and patients to elucidate how the concepts of personalized medicine are being incorporated into today’s clinical practices, specifically in the area of colorectal cancer. How does personalized medicine apply at each stage of the patient journey, from prevention right through to survivorship? How do the various activities in health research and health care need to change to make personalized medicine accessible? The conference chairs, Dr. Axel Grothey, Professor of Oncology at the Mayo Clinic in Rochester, Minnesota, and Dr. Jean Maroun, Professor of Medicine at the University of Ottawa and Medical Oncologist at the Ottawa Regional Cancer Centre, recruited an impressive group of experts to explore the challenges of the moment.

Ethical and legal considerations may ultimately form barriers to the advancement of personalized medicine. Today however, the greatest threat to progress in precision therapies in Canada lies in the reimbursement process. As provinces look to control their healthcare budgets, access issues are a daily challenge. It seems evident that as biomarker testing makes it possible to identify sub-groups of patients who will respond to different therapies, the cost effectiveness of these products will improve and coverage will be more easily justified. However the development of new biomarkers to achieve this goal is certainly not a given (see the article based on Dr. Carolyn Compton’s presentation at the conference on page 13). The cost of developing precision therapies for smaller groups of patients also poses a challenge to the model of drug development as a whole, underlining the need for smaller and more cost efficient trials as well as new approval models that include strategies such as risk sharing and earlier stage conditional approval.

Furthermore, the full potential of personalized medicine can only be reached if the unique and specialized achievements of healthcare professionals from all disciplines are able to bring about real and practical changes in the delivery of health care (see the article on page 11 by Dr. Winson Cheung based on his presentation at the conference).

We are just at the beginning of this great challenge. It requires ongoing and timely knowledge transfer between researchers, clinicians, government, industry and patients. Personalized Medicine in the Management of Colorectal Cancer provided a unique opportunity and an important first step to an interdisciplinary approach by providing a platform for interaction between health professionals and other parties who play a determining role in seeing personalized medicine fully implemented in clinical practice.

At the heart of personalized medicine are patient empowerment and the desire for patients to play an important and central role in their own health care. Consequently the CCAC will continue to promote a multidisciplinary approach to personalized medicine in the management of colorectal cancer.

Videos of the presentations and panel discussions from Personalized Medicine in the Management of Colorectal Cancer can be viewed at: www.cos.ca or www.oncologyeducation.com.