SAKK-CPTC Network Panel Testing Recommendations for Breast/Ovarian Cancer Patients

Gene panel (or multi-gene) testing by next-generation sequencing (NGS) has become the standard diagnostic method to screen patients suspected of hereditary breast / ovarian cancer. It allows the identification of pathogenic germline sequence variants in a comprehensive, timely and cost-effective manner.

The SAKK network for cancer predisposition testing and counseling recommends gene panel analysis for breast and ovarian cancer patients. The panel composition, including number and order of the genes to be analysed remains an ongoing matter of discussion and active research. The CPTC Network suggests analysing only those genes whose clinical validity has been clarified and a regularly updated list will be available on the SAKK website.

When choosing panel testing, pre- and post-test genetic counselling is indicated. Genetic testing should be performed only after genetic counselling that includes a discussion of the advantages, disadvantages, and limitations of panel testing as well as the increased risk of discovering a variant of unknown significance (VUS) when analysing multiple genes. The option of panel testing should be considered as shared decision making with the patient, especially in the context of pre-symptomatic testing.

Depending on a particular personal and/or family history it may be reasonable to directly start gene panel testing of additional genes. We recommend discussing the options with a medical geneticist or a SAKK CPTC member.

Appendix 1 : Panel Testing Recommendations for Breast/Ovarian Cancer Patients 2018

Gene Panel Breast Cancer

Genes:	BRCA1/2	ATM	CHEK2	PALB2	PTEN	STK11	TP53	CDH1 (lobular breast cancer)

Gene Panel Ovarian Cancer

Genes:	BRCA1/2	BRIP1	MLH1	MSH2	MSH6	RAD51C	RAD51D