



Our impact:

B-CAST has helped established an unprecedented comprehensive data source for breast cancer research in Europe including clinical and germline genetic data of over 200,000 female breast cancer patients, and detailed and comprehensive risk factor, tumour, treatment and follow-up information for large subsets. Molecular profiling by immunohistochemical staining and DNA sequencing of breast cancers on this scale, and integrating these with germline genetics, including novel germline genetic data generate by BRIDGES, and non-genetic factors, had not been previously attempted. The unique data resource now managed under the BCAC umbrella provides excellent opportunities for future research on breast cancer prevention, diagnosis and prognostication, including deep learning. Continued support for sustaining these valuable resources and infrastructure developed during the tenure of the projects will be needed.

The research findings in B-CAST progressed the field of the aetiology - understanding the risk factors and mechanisms – of breast cancer risk and prognosis. The added value of two complimentary projects like B-CAST and BRIDGES funded together, was shown through the successful development of the CanRisk tool, combining the different components of both projects while striving for the same end goal.

The most salient and tangible societal impact is the development of risk and prognostication models and online tools with direct clinical application for patients and women at risk in the EU and beyond. Translating these tools in each language and implementing it in a national context is a time-consuming and challenging task, dependent also on the existing health care structure in each country. The EU can play a strong facilitating role here by adopting these recommendations and urging member-states to implement them. We foresee that our findings will be translated in clinical practice in the next 5-10 years. This would enable tailoring screening programmes based on individual characteristics, which could in turn improve their cost-effectiveness in reducing mortality from breast cancer within the EU.