Interval Cancers in the Bowel Screening Pilot – summary

The report provides a preliminary analysis of interval cancers from the Bowel Screening Pilot (BSP) and early estimates of sensitivity. Interval cancers are cancers that are diagnosed between a negative (normal) screen and the time the next screen would have occurred. Sensitivity is the proportion of cancers in the screened population that are identified through screening.

This report is preliminary as it is restricted to the first four years of the BSP and solely refers to interval cancers and sensitivity relating to the faecal immunochemical test (FIT) part of the screening pathway. It does not include the other type of interval cancers, namely interval cancers diagnosed following a negative diagnostic test (colonoscopy or computed tomographic (CT)-colonoscopy) undertaken in response to a positive FIT. Information on negative diagnostic test interval cancers contributes to understanding of the performance of the diagnostic part of the screening pathway and is required before overall sensitivity of the BSP can be calculated.

Insufficient time has elapsed for all FIT interval cancers from the full period of the BSP to have been reported to the New Zealand Cancer Registry (NZCR). Identification of negative colonoscopy or CT-colonoscopy interval cancers requires longer follow-up. This means the data for this type of interval cancer for the first four years is incomplete and could not be analysed for this report.

The report has been produced to share the information gathered to date in the spirit of transparency and open communication. However, caution is advised in drawing any strong conclusions from analysis due in part to the restrictions noted above but more importantly because the number of cancers identified to date is small.

International evidence to support or contrast these preliminary findings is a challenge to obtain. The expected rate of interval cancers and sensitivity are influenced by factors such as the type of screening test used, the threshold used to determine a positive screen, the age group invited to screen, and the underlying incidence of bowel cancer in the eligible population. The published information internationally relates to screening trials, pilots and national programmes that all differ in greater or lesser degrees to the BSP. The pilot in the Netherlands is the most similar. Therefore, this report compares the preliminary finding of the overall ratio of FIT interval cancers to screen detected cancers in the BSP to what the Dutch have reported. This comparison suggests that the final BSP results may be more favourable than that published by the Dutch, but this will need to be confirmed when there is data for the entire period of the BSP.

Other preliminary findings have not been directly compared to the available international evidence in the published report due to comparability factors and concern about inferring too much meaning from a small amount of cancers. When fuller information is available on the number of interval cancers over the entire BSP and the site and stage of these cancers, the significance of the findings including initial versus subsequent screen interval cancer rates, and the pattern by age group will be explored. Initial consideration of these early findings include that greater sensitivity might be expected following initial screens due to a higher proportion of advanced disease amongst the cancers present in first time screeners, with some international studies having shown a similar trend. Biological differences in bowel cancer developing in an older age may explain differences by age and again some international studies have shown differences by age group. However, these hypotheses cannot be confirmed for the New Zealand setting until the complete data set is available.