Top ten research priorities for detecting cancer early

The EUROCARE project,[1] monitoring cancer survival in 29 European countries, shows that relative survival in the UK is intermediate-to-low for several common cancer types, compared with other high-income countries. Cancers diagnosed at an advanced stage are associated with poor prognosis, whereas finding cancer early offers patients the greatest potential for cure, and is economically best value.[2] This principle is endorsed by Cancer Research UK's strategy to "facilitate a major shift in early diagnosis research". However, currently, a mismatch exists between research questions considered important by researchers and those important to patients, carers, and health professionals.[3] The Detecting Cancer Early Priority Setting Partnership was established to identify the top ten research priorities in this area relevant to non-research stakeholders.

We used a modified nominal group method established by the James Lind Alliance that included patients, carers, members of the public, and health-care professionals. Priority setting was done using online surveys, online voting, and a workshop of 16 patient representatives and 12 health-care professionals. The setting was UK-focused but international participation was additionally sought.

In the first online survey, 554 respondents (66% patients and carers; 75% women; 87% white; 92% UK-based) provided 1362 suggestions. 54 unique indicative questions were identified, which were checked against the literature to confirm that all were unanswered (ie, uncertainties remained). Seven broad themes emerged: health promotion, National Health Service processes, new tests, population characteristics, screening (including risk stratification), symptom awareness, and symptom investigation. The following were out

of scope: cancer in people younger than 18 years, prevention, and post-treatment recurrence.

A second online survey allowed 241 participants (70% patients and carers; 71% women; 98% white; 96% UK-based) to rank the top ten research priority questions (panel), which were agreed during a workshop.

These questions aim to provide a platform for researchers, funding bodies, and industry to ensure that future research funding and activities in the early detection of cancer focuses on questions that are important to patients, carers, and health professionals.

Panel: Top ten research priority questions for detecting cancer early

1. What simple, non-invasive, painless, cost-effective, and convenient tests can be used to detect cancer early?
2. Can a blood test be used to detect some or all cancers early, and how can it be included into routine care?
3. Would increasing access to tests to diagnose cancer within General Practices improve the number of cancers detected early, and is it cost effective?
4. What cultural, religious, gender (including transgender), and behavioural issues (including stigma associated with illness) prevent a person from reporting early symptoms of cancer?
5. How can genetic testing be effectively used to identify individuals at risk of developing cancer?
6. Can we use a cancer-relevant diagnostic tool (eg, reminders in medical records) to help recognise patients presenting on multiple occasions with similar symptoms?
7. Can effective screening tests be developed for cancers we do not currently screen for (eg, lymphoma, ovarian, pancreatic, and prostate cancer)?
8. Can we use data from patients who have already been diagnosed with cancer to look for early warning signs that might have been missed or not investigated appropriately at first appointment?
9. What is the best way to coordinate information between different health-care sectors and professionals to improve early detection of cancer?
10. Can we predict how a tumour develops more accurately, and would this approach help to reduce unnecessary investigations and treatment (ie, overdiagnosis)?

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