Cancer Care Costs and Clinical Trials

Sir

It was with great interest we read the report on Accrual to Cancer Clinical Trials published July 2016. We congratulate our colleagues on undertaking such important research. Between 2007 and 2015 clinical trial accrual has risen by 50\%\textsuperscript{1}. The remarkable progress in therapeutics, diagnostics and interventions, is allowing us to offer our patients more now, than was ever possible previously. However, these developments highlight the economic challenges of extending life for patients with metastatic disease, and increasingly, improvements in survival are coming at a cost that exceeds any level that has been reasonably proposed as cost-effective\textsuperscript{1}. Cancer care costs constitute a substantial fraction of healthcare spend, with the cost of cancer care in the United States (US) expected to increase from $125 billion in 2010 to $158 billion in 2020\textsuperscript{2}.

Reconciling the cost, value and clinical benefit in cancer care is one of the profound challenges that will shape the evolution of oncology in the coming decades. Improvements in the coordination and collaboration of national clinical trials programs have the potential to provide significant clinical benefit for patients. The National Cancer Institute has emphasised the value clinical trials play in developing treatment delivery pathways and sharing genomic data. Since 2007, at our institution we have prospectively measured monthly drug cost savings through clinical trial availability. Novel agents are provided free-of-charge by the trial sponsor for patients on clinical trials. Between December 2007 to September 2016, medications to the value of €4,170,420.79 have been administered to patients. On average, the Clinical Trials Cancer Unit in Cork University Hospital administers breakthrough medications to patients to a value of €50,000 – €90,000 each month. The economic impact is clear, with clinical trials providing expensive medications which may otherwise need to be funded by the state.

There are other economic benefits to clinical trials. These include funding for ancillary services provided as part of the trial, such as pharmacy staff time, laboratory costs, administration costs and avoided treatment costs (as in the case of the Oncotype DX test). Almost 200 people are directly employed working on cancer trials in Ireland\textsuperscript{3}. Many trials fund the regular radiologic imaging needed to monitor cancer patients on therapy. This is provided through the private sector, thus freeing up slots in busy public sector radiology departments. There are also the benefits of improved health and longer lives for patients, leading to lower future healthcare costs. Expanding clinical trial infrastructure in Ireland would allow greater access to novel agents and by our estimates, be cost effective. An independent report commissioned by Cancer Trials Ireland (formerly ICORG) is supportive of this view and estimated that the €3.63 million funding from the Exchequer, and other grants, allocated in 2016 to cancer trials, will save the Health Service Executive at least €6.5m in cancer drugs cost, generate almost €6m in tax
revenues, contribute €16.5m to Ireland’s GDP and support over 230 jobs⁴.

In the coming decade therapeutic advances in cancer care will increasingly be limited by the cost of novel agents. Expansion of clinical trial infrastructure is one potential cost-favourable solution to this issue.

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