Do media reports on cancer research give the public distorted hope of a cure for cancer?

It is extraordinary difficult to communicate the results of cancer research to the public due to the complexity of underlying science, the overwhelming desire to focus on positive results and the difficulty of understanding the limitations of clinical trials. To my mind it is more often our nature to convey overly optimistic outcomes rather than intentionally offer false hope. In the recently published clinical trial of Ipilimumab alone, Nivolumab alone, or the best therapy of a combination of both drugs which act via different mechanisms to activate anti-tumour T-cells, progression-free survival was elevated to around 58 per cent in patients with advanced melanoma. Overall survival for the combination therapy group at 16 months was around 40 per cent. Unfortunately, one-third of patients could not tolerate the entire therapy, which had to be discontinued due to toxic side-effects. For the patients who could tolerate these drugs, outcomes were truly beneficial given that the patients in this clinical trial had late stage melanoma tumours that were not eligible for surgical intervention. Importantly, the study confirmed the feasibility of the biological approach to activate anti-tumour T-cells that are suppressed by cancer, and also confirmed that looking at the target of the drug(s) in the patients’ tumour can inform the probability of positive outcome.

Surgery, chemotherapy and radiation therapy will certainly remain vital front-line therapies for cancer patients, but when these traditional approaches no longer work effectively, or as effectively as emerging alternatives, we need to consider treatments such as immunotherapies that can activate the patients’ own natural immunity to cancer. In time, we will undoubtedly add many tools to the immunotherapy toolkit, as well as some understanding of combinations that can boost therapy and reduce unwanted side-effects. So, yes, we should really be excited by the recent clinical trial in melanoma immunotherapy published in The New England Journal of Medicine, for example, but at the same time perhaps we do need to recognise that it did take considerable time, effort and deliberate engineering, for example, to transform the Wright brothers’ first flight in 1903 into the luxury of travel we enjoy today. We need to be persistent and keep an eye on the biology.

Dr David Bzik
(The Geisel School of Medicine at Dartmouth, USA):

Reports on successful clinical trials of targeted molecular therapy for cancer treatment and the combining of two immunotherapies have recently hit the news, with headlines carrying explicitly optimistic messaging. But does this give the public false optimism? International Innovation invites a selection of researchers to share their opinions.
Unfortunately, both the public and news reporters remain relatively uneducated about the realities of clinic development and the drug approval process. This is especially difficult in fields such as oncology where there is substantial mortality and current therapies often include substantial side effects. Most patients are looking for treatment of their disease today, not months or years from now when their disease course will probably have already been determined. For these people, promising headlines of positive results often lead to false hopes. Good news coverage of these findings includes a description of the next steps in the development process and realistic timelines for availability of any resultant therapies.

Another problem with some news coverage is the concept of a ‘cure for cancer’. This naïve goal misses the point that cancer is a heterogeneous collection of conditions with different aetiologies, natural histories and treatments. It also glosses over the huge advances that have already been realised in oncology, such as a reduction in mortality in paediatric acute myelogenous leukaemia from 90 per cent in the 1960s to 15 per cent today.

DRS CHRISTOPHER SCHABER AND RICHARD STRAUBE
(Soligenix Inc, USA):

I see it as a balancing act between wanting to share exciting new data with the public, which after all pays for the vast majority of early stage research performed in our labs, versus the risk of not raising expectations too high, which may not be realistic and/or deliverable. I believe our responsibility as researchers is to keep these in check. It certainly is our job to report encouraging results that may have significant clinical impact on disease and its progression to the lay press, but we also have the responsibility of informing the public that a number of the preclinical models of a specific disease we use in the lab may not translate into the clinic, and that a treatment for one type of cancer may not universally apply to all cancer patients.

ANIL SHANKER
(Meharry Medical College, USA):

Cancer research is communicated in the media and regarded by the public as an ongoing search for a magic pill that will cure patients of all their cancer woes. However, the situation is more complex than this due to the heterogeneous nature of cancer – cancers among individuals or the two cancers, pre-metastatic or metastatic, within the same individual are not alike. This is why, lately, personalised medicine has been in the spotlight, wherein targeted molecular therapy and combinatorial immunotherapies are customised to develop a personalised ‘cure’ for cancer instead of giving the same treatment to every patient. The media should relay the personalisation aspect of cancer treatments to the public so as to make it clear that cancer affects everyone differently. This implies that patients should work diligently to adopt a personalised lifestyle and treatment plan for their specific type of cancer, in consultation with oncologists and cancer researchers.

DR GERALD DENIS
(Boston University School of Medicine, USA):

Optimism in new discoveries is essential for attracting researchers and investors, but enthusiasm often exaggerates potential benefits in the interest of stock price. Non-responder patients are always with us, even among patients who appear to be perfectly suited to a new therapy. The matter is worsened by patient advocate foundations that use terms such as ‘fighting’ and ‘beating’ cancer as though survival and tolerating a toxic chemotherapy regimen is a matter of willpower. These factors insert cruelty into a difficult diagnosis. Thoughtful oncologists are modest and appreciate unpredictable and often discouraging results that accompany new therapies.