Striving for Dissatisfaction at the 2017 PROS Meeting in New York

A famous American medical school Dean, Wilburt C. Davison (1892-1972), was fond of saying that the goal of an academic medicine to strive for dissatisfaction. No matter how well you thought you or your organization was doing, you should not be satisfied. You should always strive to do better.

The 2017 PROS meeting in New York is now over and it is time to reflect on what we, as a specialty, can do better. As a way of grappling with this issue, I have been thinking about what we as a group are interested in talking about and listening to. Since the program committee for the meeting selected the speakers and topics for the panel discussions and the symposia, I focused on the proffered papers and the posters which were awarded the title of "best posters of the meeting". These were, I ventured, a reasonable sample of what were the topics that most interested our specialty in 2017.

There were 22 proffered papers and award-winning posters. Nine (41%) primarily addressed measuring or reducing the undesired late effects of pediatric radiation therapy. Eight (36%) primarily addressed techniques of improving local tumor control with radiotherapy. Three (14%) primarily addressed technical ways of administering external beam radiation therapy in children. Two (9%) addressed patterns of care. Based on this analysis we can conclude that pediatric radiation oncologists seem to be focused on our historically pre-eminent topics of what is the best way to administer radiation therapy to improve local tumor control and reduce undesired late effects of treatment. For the most part our meeting's symposia and educational sessions recapitulated these themes.

Let's look at the recent meeting from another direction: What was missing? What didn't we talk much about?

The most obvious thing that was missing from the physical layout of the meeting was that at the scientific sessions at Memorial Sloan-Kettering Cancer Center there were no commercial or industry exhibits. No salespeople were hawking their proton or carbon ion wares from behind display tables. The salespeople appeared at the cocktail hour before the gala dinner on Friday night, but this was a relatively brief and muted appearance. I was pleased by this difference from previous meetings and I am highly supportive of Memorial Sloan-Kettering's policy of banning commercial displays from their meeting spaces.

As regards the content of the proffered papers, posters, and invited presentations, I observed that there was very little basic biological work presented. Only one presentation directly and
substantively addressed the clinical use of the molecular biology of brain tumors - and that presentation was given by a pediatric neuro-oncologist, not a radiation oncologist. One other presentation showed studies in mouse models of the abscopal effect and some cell culture radiobiology. Otherwise, there was not a cell survival curve to be seen - in contrast to what must have been ten different speakers who showed the Bragg peak for proton therapy.

This lack of biology was the first cause of my dissatisfaction. For whence will come personalized pediatric radiation therapy of the future based upon the individual molecular biology of a patient's tumor? Why aren't any of our young investigators showing us studies of animal or cellular models of childhood cancer? We heard nothing at the meeting about solid tumor biology, tumor blood flow, modification of a pediatric tumor's oxygenation status, or angiogenesis.

A second cause of my dissatisfaction was the desultory way that our speciality is treating racial and economic disparities in the delivery of technically complex radiotherapy to children. There are more linear accelerators within three blocks of where we just met on East 68th Street in Manhattan than are available for the 99 million residents of Ethiopia. Those of us in New York just witnessed a largely White and North American/European group of speakers address a largely White and North American/European audience of a allegedly international society on the topic of how wealthy institutions in wealthy countries can administer proton therapy to a disproportionately White and wealthy population of children. It is high time we turned our energy to denouncing the unconscionable profits being made by some radiation oncology equipment manufacturers and pharmaceutical companies, the failure of governments to intervene in the unfettered free market for this equipment, and address racial and economic disparities in cancer treatment availability.

I wonder where the biology has gone in radiation oncology? Our medical oncology colleagues are identifying new "drug-able" targets and the drugs to hit those targets. In contrast, what we are doing is talking about dose distribution, dose distribution, and dose distribution. Have we become so fascinated with the physical means of delivering radiotherapy to children that we have forgotten our roots in biology. Has this speciality become so intertwined with and beholden to equipment manufacturers and their technologies that we have neglected pediatric cancer biology?

I offer this as a challenge to my colleagues to restore biology to its rightful place in our conversations and meetings.