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## Letter to the Editor

# The surgical nature of radiation oncology should be better reflected in pre-residency training



Despite being a subspecialty composed almost entirely of physicians who pursued a form of internal medicine internship devoid of surgical background prior to starting residency, Radiation Oncology residency requires constant exposure to surgical thinking on a daily basis. Recent discussion has brought the issue of the value of surgical exposure in radiation oncology to the forefront, an aspect of radiation oncology which to date has failed to be adequately addressed.<sup>1</sup>

Common examples of surgical thinking include: extensive and evidence-based discussions with patient families regarding informed consent, the learning curve of mastering procedures over several years, knowledge of pertinent imaging anatomy, logging cases, importance of focused post-procedure physical examinations, evaluation of technical proficiency by attendings, determination of how, when, and when not to offer our treatment modality to patients (i.e. at tumor board discussions), and one-to-one attending/resident mentorships to aid in achieving technical proficiency at the time of resident graduation (in addition to senior attending/junior attending mentorships to further proficiency after graduation). These indispensable aspects of Radiation Oncology residency training are not only similar to those of surgical residency training, but are in many instances vastly different than the training focus provided by internal medicine residency.

Furthermore, areas of Radiation Oncology virtually indistinguishable from the privileges and responsibilities of surgeons in the pre-operative, intraoperative, and postoperative settings – such as interstitial brachytherapy of the prostate and cervix – are reminders that in many ways, Radiation Oncology is much more akin to a surgical subspecialty than a medical subspecialty. Additionally, the long-term considerations required by any responsible radiation oncologist of both benefits and toxicities of intervention are often indistinguishable from those of a surgeon. As a prominent neurosurgery chairman once noted: “The difference in salary between a neurosurgeon and a neurologist is best appreciated when your patient develops a complication, and you lay awake in the middle of the night wondering ‘did I do the right thing for this patient?’” (Heros RA, personal communication, 2/26/09). Such

concern can be applied to the differences between radiation oncology and medical subspecialties not involving procedure-based treatment.

Given these facts, it can only serve to augment the present and future of Radiation Oncology if a surgical background becomes more of an emphasis in the core of pre-residency preparation, particularly as there exists a growing concern for the relatively limited scope of practice within radiation oncology (absence of inpatient services, variable role in survivorship clinics, limited role in palliative care) creating a deleterious hiring environment for present and future graduates.<sup>2,3</sup> Such an emphasis has proven useful for fields such as endovascular neuroradiology, where an increasing composition of entering trainees with neurosurgery backgrounds has allowed for a more complete understanding of the acute and long-term risks as well as benefits associated with endovascular management of intracranial pathology, such as coiling of intracerebral aneurysms.<sup>4</sup> Another example is interventional radiology (IR) where trainees with a general surgery background add a similar skillset to the field; a recent study comparing postgraduate year one internships prior to interventional radiology training revealed that “a preliminary surgery internship provides the greatest preparation for IR training”.<sup>5</sup> A concrete proposal to increase surgical exposure in Radiation Oncology would involve incorporating a mandatory two-month surgical rotation during the postgraduate one year: one in general surgery, and another in a surgical subspecialty of trainee choice.

## Authors' contributions

Study concept and design: McClelland; Acquisition, analysis, or interpretation of data: McClelland, Brown, Ramirez-Fort, Jaboin, Zellars; Drafting of the manuscript: McClelland; Critical revision of the manuscript for important intellectual content: McClelland, Brown, Ramirez-Fort, Jaboin, Zellars; Administrative, technical, or material support: McClelland; Study supervision: McClelland, Jaboin, Zellars.

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**Financial disclosure**

None declared.

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**Conflict of interest**

None declared.

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Available online 17 August 2019  
1507-1367/© 2019 Greater Poland Cancer Centre.  
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<https://doi.org/10.1016/j.rpor.2019.07.011>