



## **KYLE J. GALLAGHER**

Oregon Health & Science University, Department of Radiation Medicine  
Oregon State University, Department of Nuclear Engineering, Radiation Health Physics,  
& Medical Physics

### **Degrees:**

B.A. in Physics, University of Colorado – Boulder

### **Advisors:**

Krystina M. Tack, PhD  
James A. Tanyi, PhD

### **Scholar Award Donor:**

OHSU Department of Radiation Health Medicine

### **About the Scholar:**

Kyle is researching the impact of patient intrafraction motion in single isocenter multi-target Stereotactic Radiation Surgery (SRS) treatments, with rotational motion as the primary degree of freedom. Small rotational deviations potentially can cause a loss in tumor coverage because as the multiple targets are located farther from the center of treatment (isocenter) they are increasingly displaced. Kyle's research entails simulating patient intrafraction motion, quantifying its implications for tumor coverage and normal tissue complications.

Kyle enjoys skiing, trail running and most anything outside.

### **Benefits to Society:**

Kyle's research is important for the precision and accuracy of radiation surgery treatments for cancer patients.

### **Publications and Posters:**

**K. Gallagher**, J Tannous, R Nabha, J A Feghali, Z Ayoub, W Jalbout, B Youssef, P J Taddei, "Replacement Computational Phantoms to Estimate Dose in Out-Of-Field Organs and Tissues" – Distinguished Electronic Poster presentation at the American Association of Physicists in Medicine 57th Annual Meeting, Anaheim, CA, 2015.

J. Wong, **K. Gallagher**, J. Zhang, "Vernier Picket Fence Test: A Non-Imaging Method to Localize the Radiation Isocenter with Submillimeter Accuracy" – Distinguished Electronic Poster presentation at the American Association of Physicists in Medicine 57th Annual Meeting, Anaheim, CA, 2015.