

# PIONEERS IN BIOMEDICAL RESEARCH SEMINAR

Presented by the Fralin Biomedical Research Institute and co-sponsored by the institute's Cancer Research Group



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and of Radiation Oncology;  
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## *Sex, Drugs and Radiomics of Brain Cancer*

Glioblastomas are notoriously aggressive, malignant primary brain tumors that have variable response to treatment. This presentation will focus on the integrative role of biological sex-differences, heterogeneity in drug-delivery and intra-tumoral molecular diversity - revealed by radiomics - in capturing and predicting this variable response to treatment. Specifically, Dr. Swanson will highlight burgeoning insights into sex differences in tumor incidence, outcomes, propensity and response to therapy. Dr. Swanson will further quantify the degree to which heterogeneity in drug delivery, even for drugs that are able to bypass the blood-brain barrier, contributes to differences in treatment response. Lastly, Dr. Swanson will propose an integrative role for spatially resolved MRI-based radiomics models to reveal the intra-tumoral biological heterogeneity that can be used to guide treatment targeting and management.

FRIDAY, DEC. 4 at 11:00 a.m.

This seminar will be webcast live at [fbri.vtc.vt.edu/events/live-webcast](http://fbri.vtc.vt.edu/events/live-webcast). In addition, students, faculty, and staff at Virginia Tech and Carilion Clinic who are invited to attend this lecture will receive Zoom access via email.



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