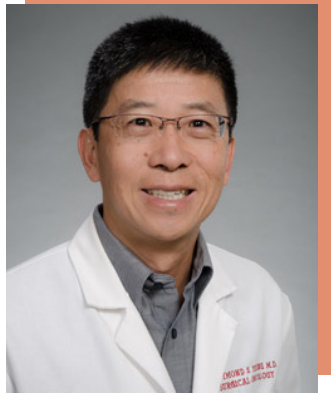


HPB RESEARCH



By: **Raymond Yeung**, MD, FRCS (C), FACS
Professor
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The Hepatopancreatobiliary (HPB) Section maintains an active translational research program that focuses on key clinical questions directly related to the management of cancers arising from the liver, bile duct and pancreas. Examples of the current research portfolio are illustrated in the figures, which have received generous funding from extramural sources (e.g., National Institutes of Health, Department of Defense), along with industry, institutional, and philanthropic support. A common thread that runs through all of the

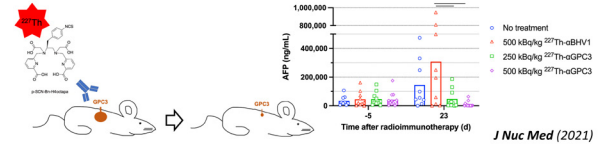
projects is the spirit of collaboration with scientists across many disciplines to apply the latest technologies in solving clinical problems. The highly acclaimed research environment at the University of Washington and **Fred Hutchinson Cancer Research Center** has provided fertile grounds for the HPB surgeons to work hand-in-hand with world-class experts in engineering, pharmacology, immunology, systems biology and data science to advance the highlighted areas of focus. We also partner with other colleagues in surgery, medicine, radiology, and pathology to generate ideas and to shape the optics of our research enterprise.

With the support of the Seattle Translational Tumor Research (STTR) Program, the HPB surgery team utilizes their ready access to clinical specimens to create a bioresource for multiple collaborations throughout the Puget Sound region. In recent years, the team led by Heidi Kenerson, Research Scientist in the Surgical Oncology Lab, has created and optimized a platform to study intact human cancers with the preserved tumor microenvironment. Operating through an IRB-approved biorepository, the organotypic models we generate have been adopted by many investigators to explore the behavior of tumors in response to drugs and other perturbagens using the new technology to define dynamic 3D tumor biology.

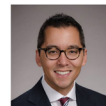
Another component of the HPB research program embraces the conduct of clinical trials to address critical gaps in patient care, such as the role of Lanreotide in suppressing fistula following pancreatectomy, the effectiveness of thermal (i.e., microwave) and non-thermal (i.e., electroporation) ablation in hepatic and pancreatic neoplasms, and the efficacy of hepatic arterial infusion chemotherapy in primary and secondary liver cancers. As these current and future studies play out, there is an increasing need to build a sustainable research infrastructure within the Department to protect and expand our basic and clinical research mission.



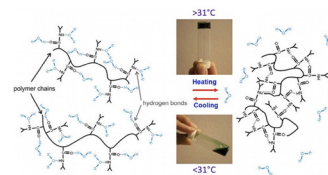
Improving liver cancer detection & therapy: α -GPC3 theranostics



James Park, MD, FACS
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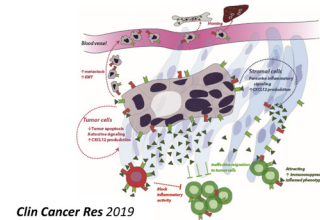
Reducing pancreatic fistula: thermo-responsive polymer



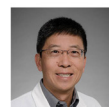
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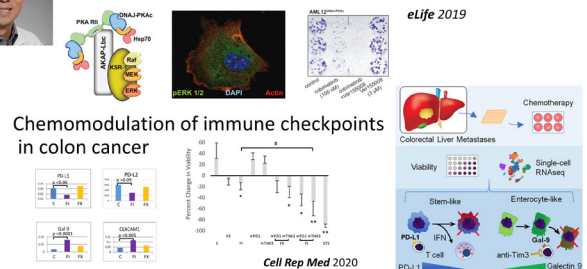
Overcoming immune escape in pancreatic and colorectal cancer



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Discovering new drugs for fibrolamellar liver cancer



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