DDC WEEKLY GI RESEARCH FORUM

Dysplastic stem cell plasticity in gastric carcinogenesis

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About this seminar: Dysplasia has been generally recognized as the greatest risk of cancer development in many types of epithelial cancers. Although the evolution of dysplasia to adenocarcinoma is of paramount importance for understanding the full spectrum of carcinogenesis, stem cell populations leading the malignant transformation of dysplastic cell lineages into cancer cells has not been defined. Dr. Choi's lab focuses on cellular and functional mechanisms involved in carcinogenic transformation of pre-cancerous cells during gastric carcinogenesis using in vitro organoid and in vivo animal models. The lab recently identified dysplastic stem cells that might be a principle source of the carcinogenic transformation into gastric adenocarcinoma and critical targets for intervention in the early induction of gastric cancer as well.

References: **(1)** Min J., et al. Heterogeneity and dynamics of active Kras-induced dysplastic lineages from mouse corpus stomach. Nat Commun . 2019 Dec 5;10(1):5549. **(2)** Choi E., et al. Expression of Activated Ras in Gastric Chief Cells of Mice Leads to the Full Spectrum of Metaplastic Lineage Transitions. Gastroenterology . 2016 Apr;150(4):918-30.e13. **(3)** Caldwell B., et al. Chief cell plasticity is the origin of metaplasia following acute injury in the stomach mucosa. Gut. 2021 Sep 8;gutjnl-2021-325310.

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4:00 PM CST

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