IA-03 ECM-dependent CAF functions in pancreatic cancer nutritional support & immunosuppression. Edna Cukierman, Ralph Francescone, Débora Barbosa Vendramini-Costa. Fox Chase Cancer Center, Philadelphia, PA, USA.
Pancreatic ductal adenocarcinoma (PDAC) is rapidly becoming the second deadliest cancer in the US. PDAC is characterized by an unusually vast stromal expansion known as desmoplasia. Desmoplasia is a chronic fibrosis-like reaction enriched in cancer associated-fibroblasts (CAFs) and CAF-generated interstitial extracellular matrix (ECM). PDAC associated desmoplasia limits blood-supplied nutrition and is highly immunosuppressive. Understanding the role of CAFs and their ECM in PDAC could lead to the recognition of new therapeutic targets. This seminar will present newly uncovered roles for the desmoplastic ECM-induced expression of a particular protein, which stimulates PDAC tumorigenesis. It will illustrate how the ectopic expression of this protein in CAFs fosters the metabolic support of PDAC cells and propagates immunosuppression. Data presented will help clarify the role that CAFs and their ECM play in PDAC, by defining CAF phenotypes and functions. The discussion will illustrate a newly uncovered ECM-dependent signaling circuit with therapeutic potential.