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Cancer-nerve Crosstalk in Human Cholangiocarcinoma

Valerio de Franchis[1], Simonetta Petrungaro[1], Enrico Mandolini[1], Francesca Somma[1], Elena Pompili[1], Antonio Filippini[1], Eugenio Gaudio[1], Cinzia Fabrizi[1], Claudia Giampietri[1]

[1] Department of Anatomy, Histology, Forensic Medicine and Orthopedics, Sapienza University of Rome, Rome, Italy

Cholangiocarcinoma (CCA) is a tumor with high tendency to infiltrate nerves. Recent studies highlighted a key role of Schwann cells (SC) in cancer progression. This aspect is still uninvestigated in CCA

We observed through a 3D model of perineural invasion the neurotropism of a CCA cell line (HuCC-T1), towards sciatic nerve explants, while no migration was observed using the cholangiocyte controls (H69).

Migration and invasion of HuCC-T1 is fostered by the SC conditioned media. Neither the HuCC-T1 nor the H69 control produce factors capable of modulating neuritogenesis in PC12.

Western blots performed on HuCC-T1 cells incubated for 48h with conditioned media from SC show a downregulation of E-Caderin indicative of epithelial-mesenchimal transition (EMT) and an upregulation of the proliferating nuclear antigen (PCNA) as compared to the controls.

Our data indicate that SC may regulate EMT, migration, invasion and proliferation in Cholangiocarcinoma.

we will further investigate this phenomenon by looking for potential mechanisms and molecular pathways involved