

SINGLE-CELL SEQUENCING REVEALED THAT THE IL-33⁺ ENDOTHELIAL CELL SUBSET PROMOTES THE PROGRESSION OF EARLY GASTRIC CANCER

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Poster

Oesophagus

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Single-cell RNA sequencing of 184,426 gastric cancer cells reveals that IL-33-expressing endothelial cells promote early gastric cancer progression through enhanced angiogenesis and organoid growth.

KEY POINTS

- High IL-33 expression was positively correlated with the depth of invasion and malignancy of early gastric cancer.
- IL-33-positive Venous-1 endothelial subclusters were increased in early gastric cancer and expressed high levels of IL-33.
- IL-33 enhanced endothelial cell survival and angiogenesis by upregulating adhesion proteins CD34 and PECAM1, and promoted growth of patient-derived early and advanced gastric cancer organoids both ex vitro and in vivo.
- Eight distinct cell lineage states were identified, with epithelial cell meta-clusters decreasing and T&NK, B, plasma, fibroblast, myeloid, and endothelial cells increasing with disease progression.
- The study provides insights for researchers investigating tumor microenvironment mechanisms and potential therapeutic targets in early gastric cancer.

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