Analysis

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3 前言

CKD 与患癌症风险之间的联系尚未明确。尽管多项研究观察到需要透析或肾移植的 ESRD 患者患癌症的风险较高，但不太严重的肾脏疾病是否与癌症相关仍知之甚少[1–3]。

肾癌流行病学[4]

CKD 和肾癌[5]

Cancer Risk and Mortality in Patients With Kidney Disease: Cancer risk was increased in mild to moderate CKD and among transplant recipients[3]

4 研究设计流程图

TCGA 突变数据 TCGA 转录数据基因共表达免疫浸润水平生存分析 timeROC 单细胞数据验证

多种慢性肾病的 FC 癌症的 FC 用基因集的 FC 来关联分析 (需要多个 GEO 数据集)

- Kidney status markers
- cancer markers
- micro-envir…
- ferroptosis
- …

5 材料和方法

6 分析结果

7 结论

8 附：分析流程

8.1 肾癌 (GEO)

8.1.1 GSE171306

- Single-cell RNA sequencing (scRNA-seq) was performed on bilateral clear cell RCC (ccRCC). Primary kidney samples from 3 patients were used for single cell RNA sequencing by 10X Genomics

8.1.1.1 细胞聚类和注释

8.1.1.2 癌细胞识别

8.1.1.3 癌细胞拟时分析

8.2 肾癌 (TCGA-KIRC)

8.2.1 TCGA 数据

8.3 血管性疾患

8.3.1 高血压性肾炎（hypertensive nephropathy）

- GSE210898: Single-cell RNA transcriptomics of hypertensive nephropathy patients

8.3.1.1 细胞聚类和注释

8.4 （原发性）肾小球性疾患

8.4.1 IgA 肾病 (IgA Nephropathy)

- GSE171314, scRNA-seq
- GSE145652, RNA-seq
- GSE175759, RNA-seq

8.4.2 膜性肾病 (idiopathic membranous nephropathy)

- GSE241302, scRNA
- GSE216841, RNA-seq
- GSE175759, RNA-seq

8.4.3 微小病变肾病 (Minimal change disease)

- GSE176465, scRNA (only but not fit)
- GSE216841, RNA-seq
- GSE175759, RNA-seq

8.5 （继发性）肾小球性疾患

8.5.1 糖尿病肾病 (Diabetic kidney disease)

- GSE204880, scRNA
- GSE175759, RNA-seq
- GSE199838, RNA-seq
- GSE217709, RNA-seq

8.5.2 狼疮性肾炎 (lupus nephritis)

- no scRNA
- GSE175759, RNA-seq
- GSE157293, RNA-seq

Reference

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