685P: Genome-wide association meta-analysis identifies novel variants that correlate with efficacy outcomes in sunitinib-treated patients with metastatic renal cell carcinoma


**BACKGROUND**

- Sunitinib is used in mRCC
- High variability in individual response
- Prior studies: SNPs in CYP3A5 and ABCB1 associated with efficacy or toxicity

**METHODS**

- SNP imputation using 1000Genomes
- SNPs tested for association with PFS and OS using Cox regression
- Fixed effect meta-analysis of GWAS studies: summary statistics of cohorts

**RESULTS**

- Genome-wide significant SNPs (p<5×10^-8) in PDLIM3 and DSCAM associated with PFS and OS
  - rs28520013 in PDLIM3: PFS (p=4.02×10^-10, HR=7.26) and OS (p=1.62×10^-8, HR=5.96)
  - rs2205096 in DSCAM: PFS (p=5.60×10^-9, HR=2.50)
  - rs111356738 in DSCAM: PFS (p=4.77×10^-8, HR=2.51)

**CONCLUSION**

- SNPs in PDLIM3 and DSCAM impact PFS and OS in mRCC patients receiving sunitinib
- The underlying link needs to be elucidated