**A**

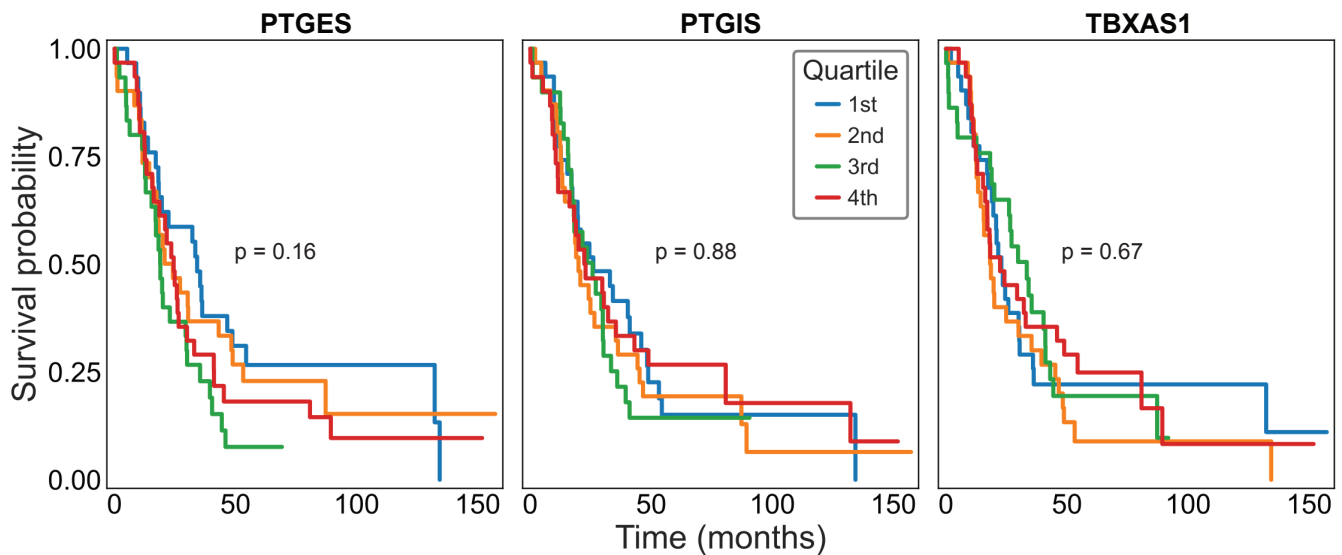| Significant correlations in IHC analyses | R | P-value |
|---|---|---|
| PTGES normal ductal epithelium vs. PTGES normal ductal stroma | 0.629** | $0.003 \times 10^{-5}$ |
| PTGES normal ductal epithelium vs. TBXAS1 normal ductal epithelium | 0.506** | $0.002 \times 10^{-2}$ |
| PTGES normal ductal stroma vs. TBXAS1 normal ductal epithelium | 0.433** | $0.003 \times 10^{-1}$ |
| PTGES normal ductal stroma vs. TBXSAS1 normal ductal stroma | 0.399** | 0.001 |
| PTGES Metaplasia epithelium vs. TBXAS1 Metaplasia epithelium | 0.258* | 0.035 |
| PTGES HG PanIN epithelium vs. PTGES HG PanIN stroma | 0.488* | 0.025 |
| PTGES HG PanIN epithelium vs. TBXAS1 HG PanIN epithelium | 0.548* | 0.010 |
| PTGIS normal ductal stroma vs. PTGIS normal ductal epithelium | -0.347** | 0.005 |
| PTGIS normal ductal epithelium vs. TBXAS1 normal ductal epithelium | -0.356** | 0.004 |
| PTGIS normal ductal stroma vs. PTGES normal ductal epithelium | 0.468** | $0.009 \times 10^{-2}$ |
| PTGIS normal ductal stroma vs. PTGES normal ductal stroma | 0.427** | $0.004 \times 10^{-1}$ |
| PTGIS normal ducal stroma vs. TBXAS1 normal ductal epithelium | 0.470** | $0.009 \times 10^{-2}$ |
| PTGIS normal ductal stroma vs. TBXAS1 normal ductal stroma | 0.360** | 0.003 |
| PTGIS Metaplasia stroma vs. TBXAS1 Metaplasia stroma | 0.406** | 0.001 |
| PTGIS WD PDAC stroma vs. TBXAS1 WD PDAC stroma | 0.387** | $0.005 \times 10^{-1}$ |
| PTGIS PD PDAC stroma vs. PTGES PD PDAC stroma | -0.313* | 0.032 |
| TBXAS1 normal ductal epithelium vs. TBXAS1 normal ductal stroma | 0.458** | $0.001 \times 10^{-1}$ |

**B**



Figure S6. Immunohistochemical analysis of eicosanoid sythases in PDAC samples and patient survival associated with expression of select eicosanoid pathway genes. (A) Table of significant correlations identified in the IHC analysis of PTGES, PTGIS, and TBXAS1 expression. Green, normal tissue; purple, diseased tissue. HG, high grade; WD, well differentiated; PD, poorly differentiated. (B) Survival curves for stroma-specific expression of PTGES, PTGIS, or TBXAS1 generated from the Maurer et al., dataset representing 124 PDAC patients.