

## Description of Additional Supplementary Files

### **Supplementary Data 1:**

Differential expressed (DE) genes – all cell types.

### **Supplementary Data 2:**

Differential expressed genes – between metaplastic cells and acinar cells.

### **Supplementary Data 3:**

Differential expressed genes – between metaplastic cells and ductal cells.

### **Supplementary Data 4:**

Differential expressed genes – acinar, ductal, metaplastic and stomach cells.

### **Supplementary Data 5:**

Differential expressed genes – between acinar cells and early metaplastic cells (“triple positive”).

### **Supplementary Data 6:**

Differential expressed genes – between early metaplastic cells (“triple positive”) and late metaplastic cells.

### **Supplementary Data 7:**

Differential expressed genes – human PDAC sample.

### **Supplementary Data 8:**

Differential expressed genes and overlap expressed genes between stomach pit cells and metaplastic pit-like.

### **Supplementary Data 9:**

Quantities analysis of metaplastic cell-types and states.

### **Supplementary Data 10:**

Differential expressed genes in immune and stromal cells