

## **Descriptions of Additional Supplementary Files**

### **Supplementary Data 1**

**Description:** Sample information

### **Supplementary Data 2**

**Description:** Sample-level exome coverage statistics

### **Supplementary Data 3**

**Description:** Somatic mutations in paired GBC samples

### **Supplementary Data 4**

**Description:** Putative somatic mutations in GBC samples without matched normal tissue

### **Supplementary Data 5**

**Description:** Somatic mutations in Cholecystitis, Gall stone and polyp samples

### **Supplementary Data 6**

**Description:** Mutations in GBC cell lines

### **Supplementary Data 7**

**Description:** Disease relevant germline mutations in GBC patients

### **Supplementary Data 8**

**Description:** Hotspot mutations in GBCs

### **Supplementary Data 9**

**Description:** Hotspots identified through meta-analysis

### **Supplementary Data 10**

**Description:** Cancer specific neoantigens predicted in GBCs

### **Supplementary Data 11**

**Description:** TCR clonal expansion assessment

### **Supplementary Data 12**

**Description:** TCR clonal expansion assessment

### **Supplementary Data 13**

**Description:** Tumor infiltrating lymphocytic cells