Patients underwent surgical resection from January 2004 to April 2014 (n=1,674)

- Neuroendocrine tumor, gastrointestinal stromal tumor, and etc. (n=110)
- Appendiceal cancer and anal cancer (n=19)
- Stage 0 and IV, no stage information (n=221)
- Emergency operation (n=4)
- Hereditary nonpolyposis colorectal cancer or familial adenomatous polyposis associated cancers (n=5)
- Inflammatory bowel disease (n=1)
- Double primary cancer (n=21)

n=1,545

n=1,213

n=1,204

n=1,182 (Inclusion)

S1 Fig. Inclusion criteria.