

## SUPPLEMENTARY MATERIAL

### SURVIVAL IN COLON AND RECTAL CANCERS IN FINLAND AND SWEDEN THROUGH 50 YEARS

Kari Hemminki, Asta Försti , Akseli Hemminki

#### **Diagnostics and treatment for colon and rectal cancers in Finland and Sweden**

**Supplementary Table 1.** Patient numbers in Finland and Sweden,

**Supplementary Fig. 1.** Incidence and mortality in colon (A men and B women) and rectal (and anal, C men and D women) cancers in Finland and Sweden until year 2016.

**Supplementary Fig. 2** (A, 1-year survival) and (B, 5-year survival) in male colon and rectal cancers in Finland and Sweden; 95% CIs are shown in Table 1.

**Supplementary Fig. 3** (A, 1-year survival) and (B, 5-year survival) in female colon and rectal cancers in Finland and Sweden; 95% CIs are shown in Table 2.

**Supplementary Fig. 4** 1-and 5-year survival in male and female colon and rectal cancers in Finland and

## **Diagnostics and treatment for colon and rectal cancers in Finland and Sweden**

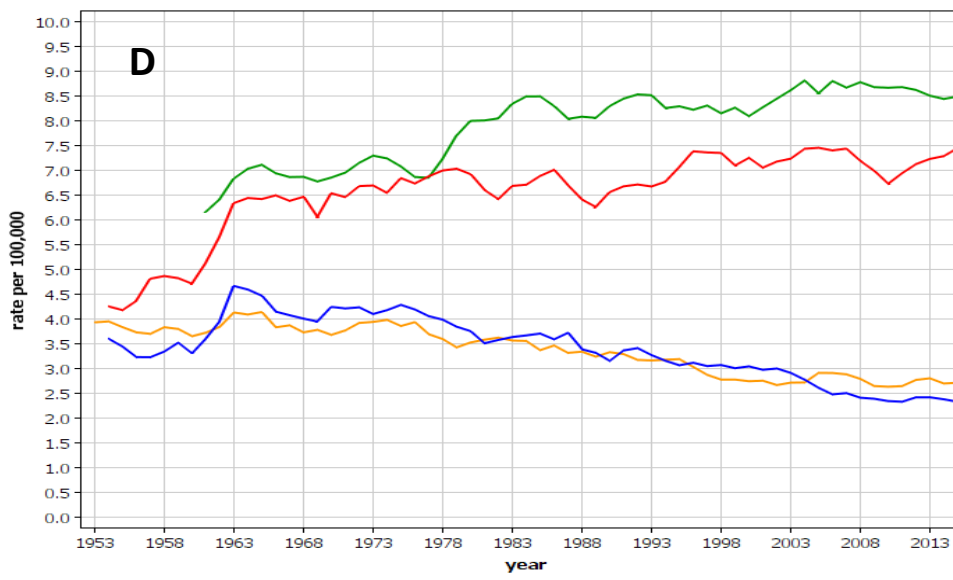
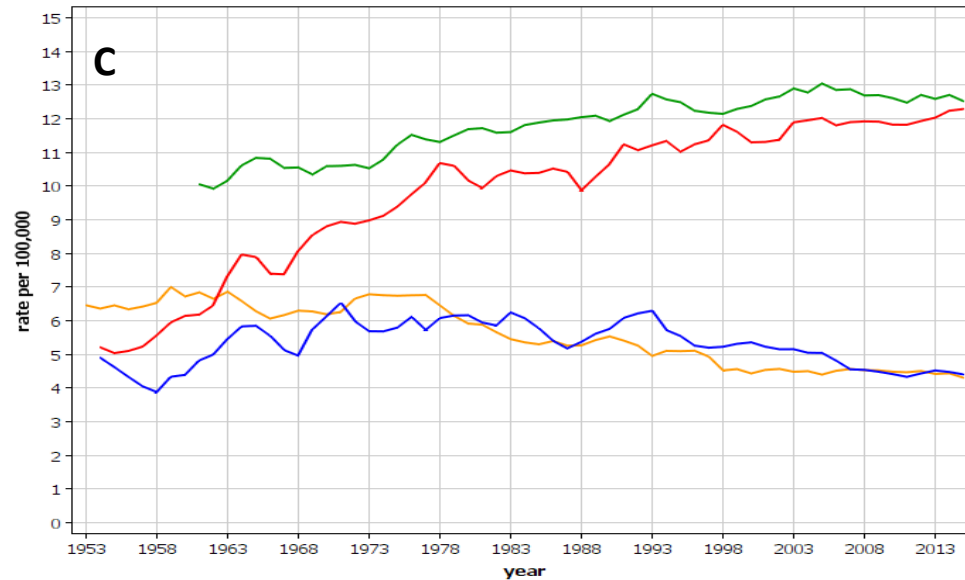
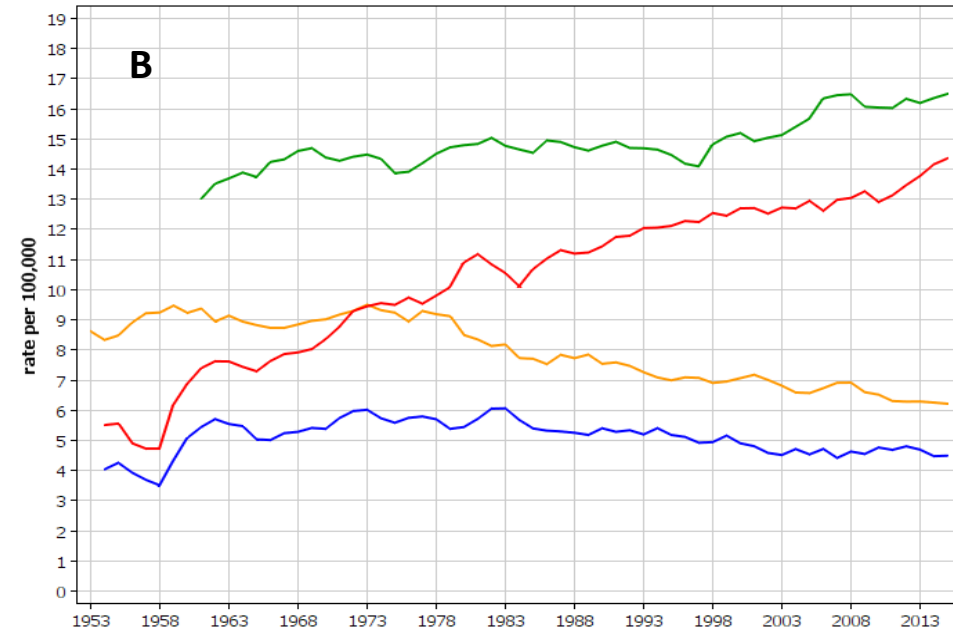
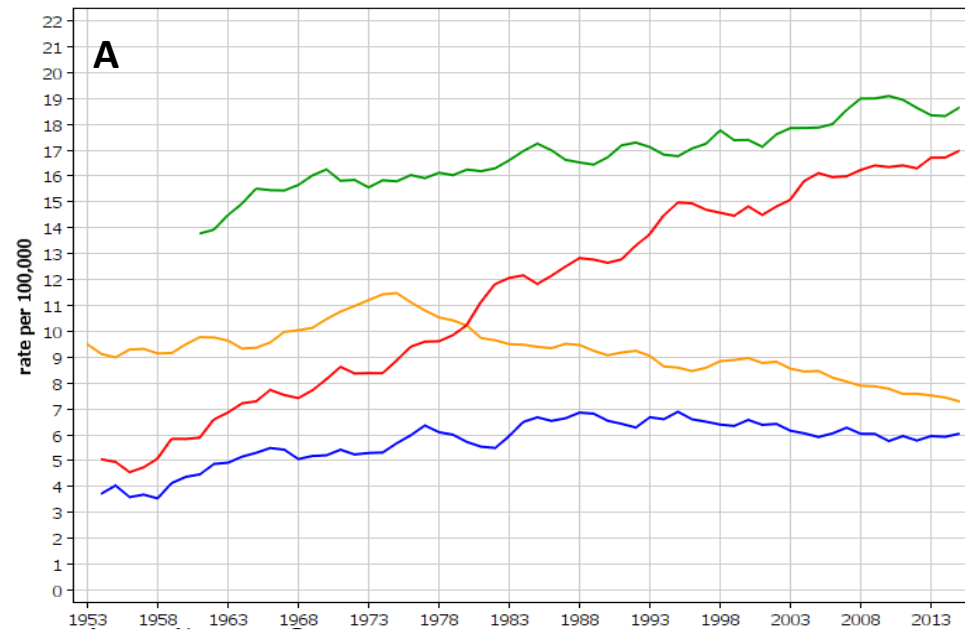
The development of the tumor-node-metastasis (TNM) classification and staging system has been important for the standardization of diagnostics and treatment in CRC. The first international TNM recommendations were published since 1958 by the International Union Against Cancer (UICC) for several cancers and in 1968 they were combined into the First Edition of TNM (1). Since then new editions followed and for colon and rectal cancer the staging system, which conveyed survival information, formed the basis of the therapy. Over the years, the diagnostic arsenal has increased to include computed tomography (CT), positron emission tomography (PET) and colonoscopy (2).

Surgery has been the traditional treatment for CRC and has remained so until today. According to the Swedish Colorectal Cancer Registry, 88% of patients diagnosed with colorectal adenocarcinoma in years 2007-2011 underwent surgery (3). For patients with large localized colon tumors (T3 or T4 or other risk factors in stage II) or with any nodal (Stage III) metastasis, adjuvant chemotherapy is additionally included (2, 4). In Sweden, adjuvant chemotherapy has been administered to about half of stage III CRC patients aged less than 75 years, and probably to more patients in recent years (3, 5, 6). Generally Stage IV tumors are not operated unless there is a need for improved local control and treatment consists of chemotherapy and biological therapies.

In rectal cancer patients, localized small tumors are resected which may be followed or preceded by chemotherapy, radiotherapy or chemoradiotherapy (2, 4). Patients with large local tumors may be treated with pre- or postoperative radiotherapy or chemoradiotherapy, and adjuvant chemotherapy, especially when there are nodal metastases. Perioperative therapy is also common with therapy given before and after surgery. As with colon cancer, rectal

**Supplementary Table 1.** Patient numbers in Finland and Sweden,**Finland Sweden (1967-2016)  
Patient numbers**

<b>Cancer</b>	<b>Finland</b>		<b>Sweden</b>	
	Men	Women	Men	Women
<b>Colon</b>	24851	31347	73467	78586
<b>Colorectum</b>	44740	49271	112698	117167
<b>Rectum and anus</b>	19889	17924	49231	38581
<b>All sites but non-melanoma skin cancer</b>	491413	484563	1007049	941127



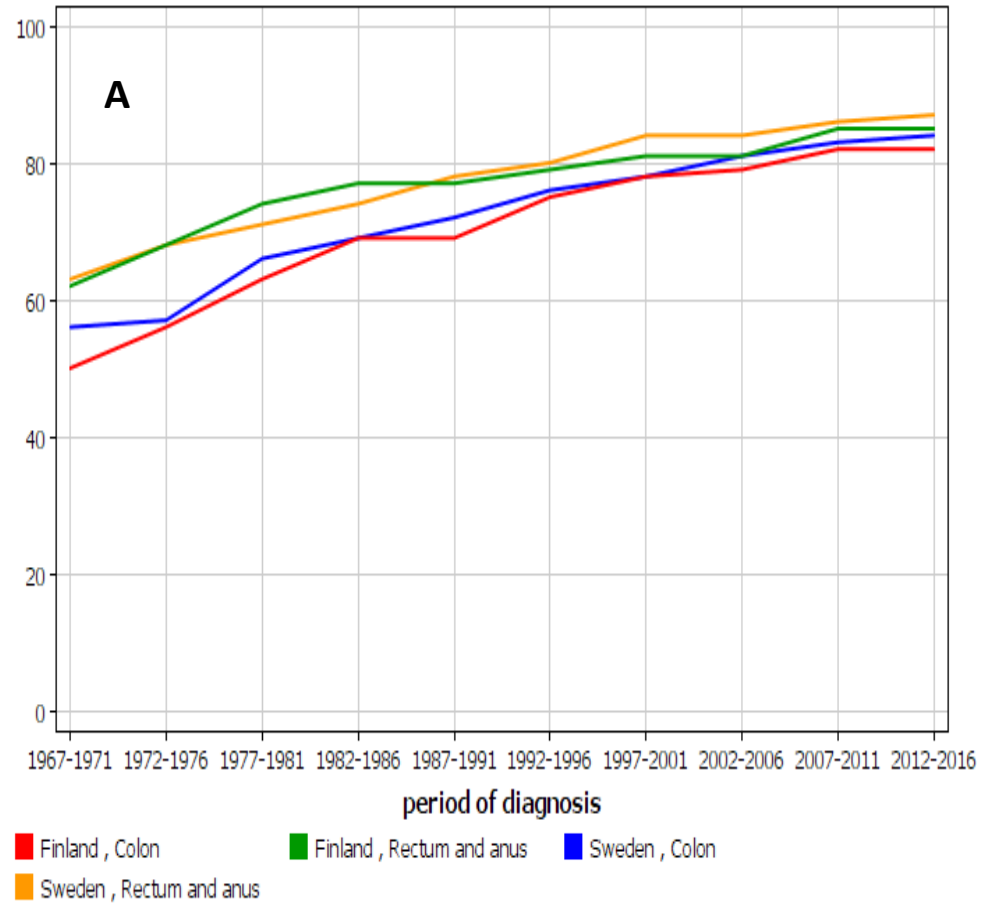
■ Incidence:Finland ■ Incidence:Sweden ■ Mortality:Finland ■ Mortality:Sweden

■ Incidence:Finland ■ Incidence:Sweden ■ Mortality:Finland ■ Mortality:Sweden

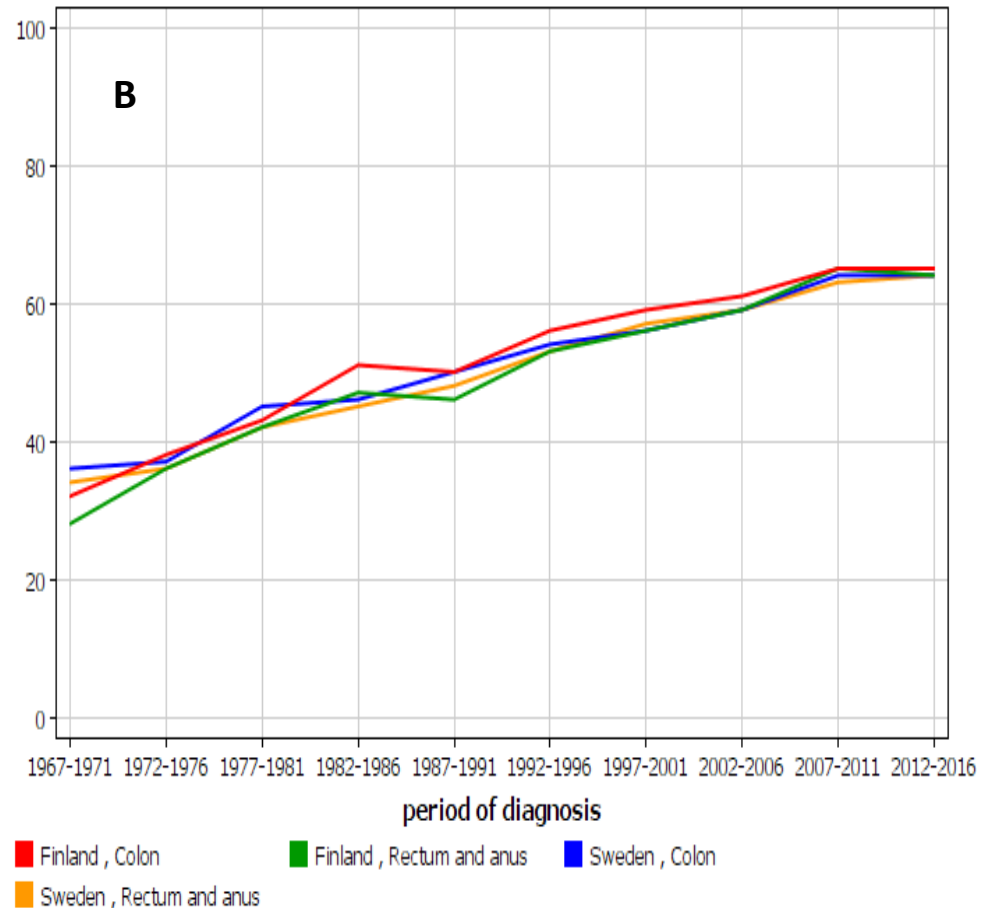
**Suppl. Fig. 1.**  
Incidence and mortality in colon (A men and B women) and rectal (and anal, C men and D women) cancers in Finland and Sweden until year 2016.

## Supplementary Fig. 2 (A, 1-year survival) and (B, 5-year survival) in male colon and rectal cancers in Finland and Sweden.

Male 1-year age standardised relative survival, age at diagnosis 0-89  
%

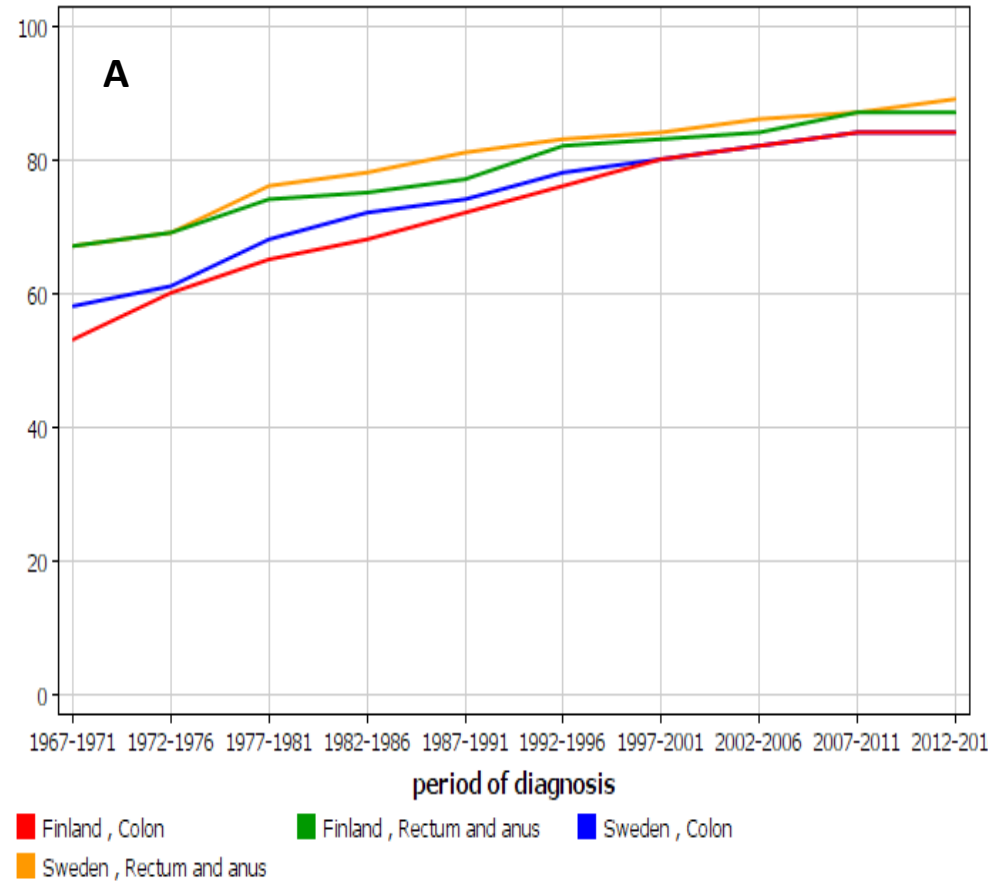


Male 5-year age standardised relative survival, age at diagnosis 0-89  
%

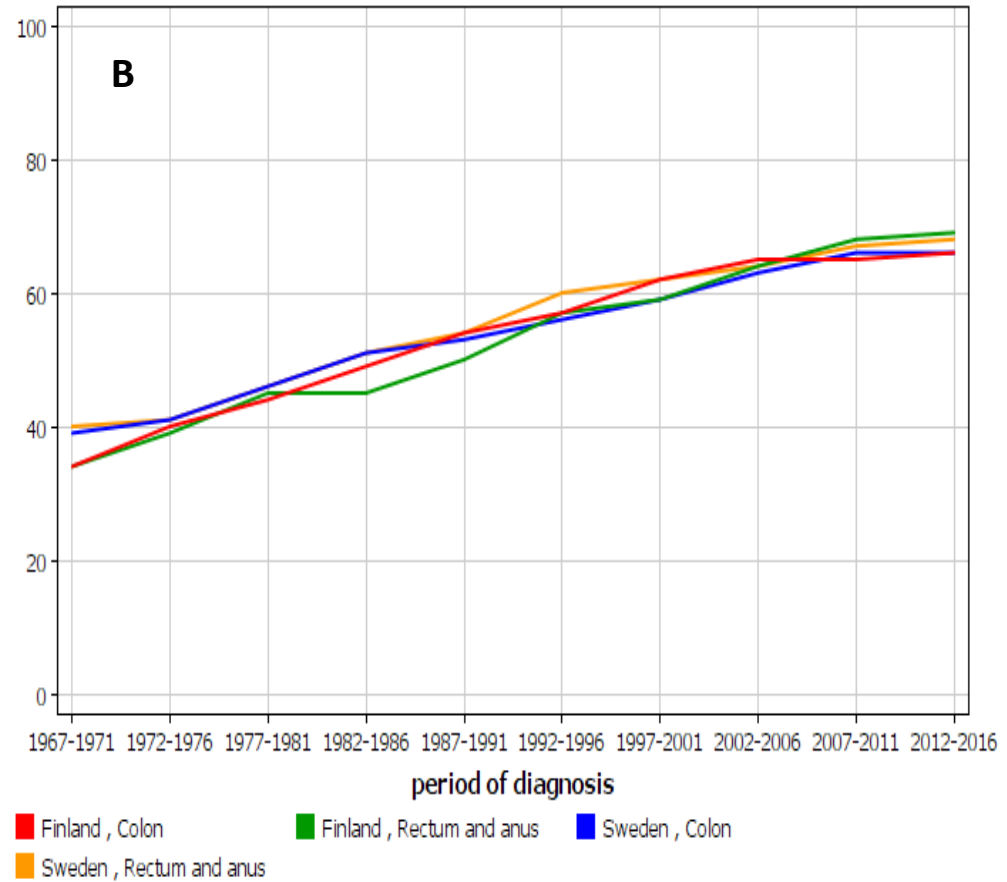


### Supplementary Fig. 3 (A, 1-year survival) and (B, 5-year survival) in female colon and rectal cancers in Finland and Sweden.

Female 1-year age standardised relative survival, age at diagnosis 0-89  
%



Female 5-year age standardised relative survival, age at diagnosis 0-89  
%



**Supplementary Fig. 4** 1-and 5-year survival in male and female colon and rectal cancers in Finland and Sweden. Note that the difference between 1-year and 5-year survival remains constant in colon cancer but narrows with time in rectal cancer.

