Risk and survival for colorectal cancer in northern Sweden
Sociodemographic factors and surveillance programs

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Colorectal cancer (CRC) is one of the most common forms of cancers. The risk for CRC is mainly associated to age, inheritance and life-style factors. Prior studies also show that sociodemographic factors, such as socioeconomic status, social support or travel distance to care may affect the risk or survival for CRC. Northern Sweden differs from the rest of Sweden in terms of an older population with lower socioeconomic status and longer distances to care. This thesis studies how differences in sociodemography affect CRC, especially in northern Sweden (papers I & II) and if colonoscopic surveillance programs can prevent inherited CRC (papers III & IV).

Papers I and II are cohort studies from the Risk North database 2007-2013. Paper III is a cohort study based on the colonoscopic surveillance registry at the Cancer Prevention Clinic in Umeå 1995-2012 and paper IV is a cost-effective analysis of the surveillance.

Paper I demonstrated an > 10% lower incidence of CRC in northern Sweden, most evident in the elderly, raising questions about differences in lifestyle. Survival analyses in papers I and II, showed an association between survival and socioeconomic status, but not to travel time to the nearest hospital. All-cause survival for patients with colon cancer was better in southern compared to northern Sweden (HR 0.92; 95% CI 0.86 – 0.97). No regional differences in cause-specific survival or for rectal cancer were demonstrated. The evaluation of surveillance in papers III and IV, demonstrated a good CRC preventive effect (SIR 0.10; CI 95 % 0.0012–0.53) including a high cost-effectiveness.

Keywords
Colorectal cancer, Risk factors, Cancer epidemiology, Endoscopy general, Health economy, Cancer prevention, Hereditary colorectal, Surveillance colonoscopy,