

# Aspects on Local Recurrence after Rectal Cancer Surgery

Akademisk avhandling

som för avläggande av medicine doktorexamen vid Sahlgrenska akademien vid Göteborgs  
Universitet kommer att offentligen försvaras i stora aulan, centralkliniken, Sahlgrenska  
Universitetssjukhuset/Östra, Göteborg torsdagen den 15 mars 2012 kl 9:00.

av  
Karl Kodeda  
Leg. Läkare

Fakultetsopponent:  
Professor Jörgen Rutegård  
Kirurgcentrum vid Norrlands Universitetssjukhus, Umeå

Avhandlingen baseras på följande delarbeten

- I. Kodeda K, Holmberg E, Steineck G, Nordgren S  
**Regional differences in local recurrence rates after rectal cancer surgery.**  
*Colorectal Dis. Epub 2009 Nov 14.*  
*Colorectal Dis. 2010 Oct;12(10 Online):e206-15. doi: 10.1111/j.1463-1318.2009.02137.x.*
- II. Kodeda K, Derwinger K, Gustavsson B, Nordgren S.  
**Local recurrence of rectal cancer - A cohort study with focus on diagnosis, treatment and outcome.**  
*Colorectal Dis. 2011 Nov 22. doi: 10.1111/j.1463-1318.2011.02895.x. [Epub ahead of print]*
- III. Kodeda K, Holmberg E, Jörgren F, Nordgren S, Lindmark G  
**Rectal washout and local recurrence after rectal cancer surgery.**  
*Br J Surg. 2010 Oct;97(10):1589-97*
- IV. Kodeda K, Gustafsson Asting A, Lönnroth C, Derwinger K, Wettergren Y, Nordgren S, Gustavsson B, Lundholm K.  
**Genomic CGH assessed structural DNA alterations in rectal carcinoma as related to local recurrence following primary operation for cure.**  
*Manuscript.*



UNIVERSITY OF GOTHENBURG

# Aspects on Local Recurrence after Rectal Cancer Surgery

Karl Kodeda

Department of Surgery, Institute of Clinical Sciences  
Sahlgrenska Academy at University of Gothenburg  
Göteborg, Sweden, 2012

## ABSTRACT

### **Background:**

Local recurrence after rectal cancer surgery has a profound impact on affected patients' lives. The overall aim of this thesis was to acquire a deeper understanding of local recurrence after rectal cancer surgery, with a long-term hope of minimising the incidence and mitigating the effects.

### **Methods:**

Analysis of quality assurance data from the Swedish Rectal Cancer Registry, review of medical records and analysis of tumour DNA with array-comparative genomic hybridisation and quantitative polymerase chain reaction.

### **Results:**

The majority of studied patients were symptomatic when diagnosed with local recurrence, deemed incurable, not well palliated and had a poor outcome. Aspects on the surgical management could partly explain a difference in local recurrence rate between regions. The local recurrence rate was significantly lower in patients that had perioperative rectal washout than in those who had not. The favourable outcome also remained after adjustment for known confounding factors. DNA in primary rectal carcinomas in tumours that subsequently recurred locally differed from DNA in tumours that did not recur.

### **Conclusions:**

Local recurrence after rectal cancer surgery is still a reality in modern day medicine and is associated with intractable symptoms and premature death. Genetic differences might be contributory to the pathogenesis but the quality of surgery is of fundamental importance. Rectal washout is an integral part of good medical practice and should be performed routinely.

**Keywords:** Rectal neoplasms. Neoplasm recurrence, local. Methodology. Rectal washout. Rectal irrigation. Anterior resection. Quality assurance registry. Follow-up. Array-CGH. Tumour DNA.

**ISBN:** 978-91-628-8408-6

<http://hdl.handle.net/2077/28246>