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Head of Research
Professor Niels Qvist
G0 Section/G2 Section

Professor Michael Bau Mortensen
G1 Section

Professor Claus Hovendal
G1 Section

Adjunct professor George B. Hanna, MD, FRCS, MergS, Academic Surgical Unit, St. Mary's Hospital, London, UK.
G1 Section

Adjunct professor Lars R. Lundell, MD, PhD, Centre for Digestive Diseases, Karolinska University Hospital, Huddinge, Stockholm, Sweden.
G1 Section

Professor Gunnar Baatrup
G2 Section

Adjunct professor Robert Steele, MD, FRCS, MergS, Head of the Cancer Research Unit at Dundee University and Chairman of Colorectal Society of Great Britain
G2 Section
INTRODUCTION

The Department of Surgery, Odense University Hospital, diagnose and treat patients with congenital malformations, benign and malignant diseases in lower and upper gastrointestinal system. The department is divided into the following sections:

1. Management.
2. Research Section.
3. Clinical Sections:
   • G0 Section (Pediatric surgery).
   • G1 Section (Upper GI surgery).
   • G2 Section (Lower GI surgery).
   • G3 Section (General surgery).
   • G4 Section (Emergency surgery).

RESEARCH COUNCIL

The Department of Surgery has a Research Council which support the Research Section. All major research projects and PhD studies are approved by the Research Council before study initiation.

MEMBERS OF THE RESEARCH COUNCIL:

- Claus Christian Vinther, Chief Consultant, MPM
- Susanne Barren, Senior Nurse, MPG
- Claus Hovendal, Professor, Professor, MD, DMSc
- Michael Bau Mortensen, Professor, MD, DMSc, PhD
- Niels Qvist, Professor, Professor, MD, DMSc
- Gunnar Bastrup, Professor, MD, DMSc
- Helen Schultz, Post.doc., PhD
- Lars Rasmussen, MD, G0 Section leader
- Torsten Pless, MD, G1 Section leader
- Per Vadgaard Andersen, MD, G2 Section leader
- Jesper Bjerg, MD, G3 Section leader
- Marianne Kirstine Thygesen, Assistant Professor, PhD
- Mark Bremholm Ellebæk, MD, PhD
- Pia Rosenkold, Research Secretary
- Tanja Sotiris Millinge, Research Secretary
ADJUNCT PROFESSORS

G1 SECTION

- **Professor Lars R. Lundell**, MD, PhD, Section for upper GI Surgery, Centre for Digestive Diseases, Karolinska University Hospital, Huddinge, Stockholm, Sweden. 
  Inaugural seminar: June 10, 2015.

- **Professor George B. Hanna**, MD, FRCS, MErgS, Academic Surgical Unit, St. Mary’s Hospital, London, UK. 
  Inaugural Seminar: September 24, 2015.

G2 SECTION

- **Professor Robert Steele**, MD, FRCS, MErgS, Head of the Cancer Research Unit at Dundee University and Chairman of Colorectal Society of Great Britain (to be appointed June 6th 2016).

ASSOCIATE PROFESSORS

G1 SECTION

- Alan Ainsworth, consultant, MD, PhD

G2 SECTION

- Marianne Kirstine Thygesen, MD, PhD

G3 SECTION

- Jesper Durup, consultant, MD, PhD

POST.DOC.’S

G2 SECTION

- Morten Kobæk-Larsen, post.doc., PhD
  - Helen Schultz, post.doc, PhD
PHD PROJECTS FINISHED IN 2015

- Mark Bremholm Ellebæk: Topical microdialysis in early detection of complications after gastrointestinal surgery.

PHD STUDENTS

G0 SECTION

- Nina Højer Hansen: Morbus Hirschsprung in children and adults - Functional result after surgery, QoL and comparative proteome analysis of mucosa in normal and affected colon.

G1 SECTION

- Ole Steen Bjerring: Endoscopic Ultrasound (EUS) and PET-CT based follow-up of patients radically resected for cancer of the oesophagus, stomach or pancreas.
- Signe Bremholm Ellebæk: Randomized study evaluating the effect of laparoscopic ultrasonography during laparoscopic resection of patients with colorectal cancer.
- Michael Bruun Nielsen: Cancer-associated fibroblasts and stellate cells: potential for a change in pancreatic cancer treatment?
- Nicolaj Marcus Stilling: Epidemiology of colorectal liver metastases and a new method for response evaluation following chemotherapy in patients with CRC-LM (PhD application submitted).

G2 SECTION

- Ditte Gommesen: Perineal tear infection (Perineal Wound Healing).
- Anne Marie Jelsig: Hamartomatose polyps - a study of the clinical and molecular genetic background
- Rasmus Krøijer: Colon Capsule Endoscopy of immunochemical fecal occult blood test (IFOBT) positive individuals in a national colorectal cancer screening program.
- Karam Faq Basil Bashir Sørensen: Anorectal abscesses and complex fistula-in-ano (PhD application submitted).
- Issam Al-Najami: PUMK-DECT, Preoperative evaluation of meso-rectal lymph nodes with dual energy-CT.
- Minna Riishede: Ultrasonography in Acute Patients in the Emergency Department.
# PHYSICIANS INVOLVED IN RESEARCH

## G0 SECTION

- Lars Rasmussen
- Mark Bremholm Ellebæk

## G1 SECTION

- Claus Fristrup
- Alan Patrick Ainsworth
- Ole Steen Bjerring
- Torsten Pless
- Michael Hareskov Larsen
- Signe Bremholm Ellebæk
- Martin Graversen
- Nicolai Marcus Stilling
- Helene Würtz
- Christian Lolle Nørregaard
- Niels Bjørn
- Mark Jakobsen
- Rasa S. Pedersen
- Susanna Pedersen

## G2 SECTION

- Niels Buch
- Thomas Kolbro
- Rozy Eckardt
- Søren Salomon
- Jesper Clausen Nielsen
- Panteha Khodadadeh
- Kristine Cederstrøm Larsen
RESEARCH ACTIVE MEDICAL STUDENTS

G1 SECTION

- Joakim Knut Meidell
- Anja Rosenlund Andersen
- Rikke Brandslund
- Martin Hangaard
- Sevim Özden
- Stella Justin Wilfred
- Chirin Khalaf
- Viktoria Benedicte Vejen Norstedt

G2 SECTION

- Katrine Kristensen
- Sabrina Valentin Thomsen
- Pernille Kock Grave
- Christian Dibbern
- Morten Frederiksen
- Carl-Philip Peter Rancinger
- Emelin Spolen
- Rasmus Emely Pettersson
- Søren Rosenlund Petersen
- Marcus Andersson

RESEARCH ACTIVE NURSES

G1 SECTION

- Vibeke Gye
- Malene Kaas Larsen
- Maria Simonsen
- Susanne Petersen
- Ulla Krogstrup Tecedor
- Helga Roued (Dietitian)
G2 SECTION

- Pernille Marie Vinifred Holm
- Christina Petersen
- Jane Holt
- Pernille Mahnfeldt
- Margit Ibsen
- Helen Schultz

OTHER SCIENTIFIC STAFF

- Jens Baelum, MD
- Rie Overgaard Jensen, MD
- Pia Rosenkold, Management Secretary
- Tanja Sotiris Millinge, Research Secretary
- Darley Petersen, Research Secretary
- Jette Bang Hedelund, Research Secretary
- Helle Kofoed Jensen, Economic staff
- Camilla Kloster Andreassen, Economic staff
- Maria Magdalena Buijs, Research assistant
- Erik Sören Halvard Hansen, Student Assistant
- Line Grønbæk Andersen, Student Assistant
PRESENTATION OF SECTIONS AND THEIR MAIN RESEARCH AREAS

G0 SECTION

Major research areas:

- Peritoneal inflammation and metabolism during the postoperative period in necrotizing enterocolitis and congenital abdominal wall defects.
- Follow-up and surgical treatment of patients with congenital anomalies with focus on Oesophageal atresia (surgical methods, pulmonary and oesophageal function).
- Anal atresia (surgical reconstruction and bowel function).
- Hirschsprung’s disease (functional outcome, intestinal proteomics).
- Congenital diaphragmatic hernia (pathophysiology, cardiac, pulmonary and gastrointestinal function).
- Abdominal wall defects (general physical function).
- Regenerative medicine and experimental surgery with focus on: Short bowel syndrome.
  Long gap esophageal atresia repair.
  Bowel wall defects.
- Inflammatory bowel disease, surgical treatment, epidemiology, and diagnosis.
- Juvenile polyps and polyposis syndromes.

G1 SECTION

Focus is on the diagnosis and treatment of pre-malignant and malignant tumors of the upper gastrointestinal tract (i.e. oesophagus, GEJ, stomach, duodenum, pancreas, biliary duct and liver). Clinical research areas include screening, epidemiology, advanced endoscopy, ultrasound, peri-operative chemo-radiotherapy, surgery, and follow up. Projects on translational and personalized medicine are included in the pancreas and gastro-oesophageal cancer research.

Major research areas:

- Minimally invasive diagnosis, staging, treatment and follow up of upper gastrointestinal tract cancer. (Collaborators: Professor George B. Hanna, Academic Surgical Unit, St. Mary's Hospital, London, UK, and Professor Lars R. Lundell, MD, PhD, Section for upper GI Surgery, Centre for Digestive Diseases, Karolinska University Hospital, Huddinge, Stockholm, Sweden).
- Colorectal cancer liver metastases (epidemiology, diagnosis, and treatment response evaluation). (Collaborators: Professor Lars R. Lundell, MD, PhD, Section for upper GI Surgery, Centre for Digestive Diseases, Karolinska University Hospital, Huddinge, Stockholm, Sweden).
- Peritoneal carcinomatosis treated by PIPAC (Pressurized Intraperitoneal Aerosol Chemotherapy). (Collaborators: Professor Marc Reymond, Department of Surgical Oncology and Therapy Center for Peritoneal Cancer (Marien Hospital, Ruhr-University, Bochum, Germany).
- Cancer-associated fibroblasts and stellate cells in pancreatic cancer. (Collaborators: Associated Professor Sönke Detlefsen, Department of Clinical Pathology, Odense University Hospital, Odense, Denmark).
- Intraperitoneal tumor cells, tumor-specific cell-free DNA and circulating tumor cells in upper gastrointestinal tract cancers (Translational research).
Research areas of interest are congenital recto-anal anomalies in adulthood, regenerative medicine and experimental surgery, inflammatory bowel disease, surgical complications, peritoneal inflammation and metabolism, complicated anorectal fistula, postoperative pain management, patient involvement in treatment, navigation and support to cancer patients.

Major research areas:

- Pelvic Floor Centre - Diagnosis and treatment of patients with acquired and congenital recto-anal anomalies. Anal incontinence. Obstetric sphincter tear. Development of new treatment principles. The center will be affiliated to the Centre for Regenerative Medicine. The center will operate in collaboration with the Department of Urology, the Department of Obstetrics and Gynecology, and the Department of Pathology, OUH.
- Regenerative medicine and experimental surgery – the department is a key player in the development of new treatments and possible patents for medical equipment/aids in. Collaboration with the Institute of Pathology, KBF, Biomedical Laboratory, OUH, the Region of Zealand and industry.
- Inflammatory bowel disease - Highly specialized center for the surgical treatment of complications involved in inflammatory bowel disease. Development of experimental models for pathophysiological studies. Epidemiological studies. Development of new diagnostic methods including stem cells therapy. Collaboration with the Department of Nuclear Medicine, Department of Medical Gastro-Intestinal Diseases and Department of Clinical Epidemiology, OUH.
- Anorectal surgery – Highly specialized treatment of complicated anorectal fistula.
- Patient involvement – The department will be highly specialized within the field of the involvement of emergency patients. Development of methods for patient involvement, to include pain management and patient care in acute abdominal pain (PiSAM project). Collaboration with research groups in the field of patient involvement in England.
- Nurse navigation and support to cancer patients
G2 SECTION (MALIGNANT)

Major research areas:

- Neoplastic conditions of the colon and rectum. Focus on large adenomas and early colorectal cancers including minimally invasive treatment, diagnosis and staging, especially trans-anal ultrasound techniques, dual energy CT and visualization-fusion techniques EMR, ESD and TEM surgery.
- Screening and camera capsule studies. Camera capsule technology in colorectal cancer screening in collaboration with dedicated European Screening Centres. The capsule technology in diagnostics and follow up will also be part of this work package.
- Primary, secondary and tertiary prophylaxis against colorectal neoplasia: Prophylactic effect of Falcarinol and Falcaridiol from carrots to prevent colon neoplasms. Cell lines and rat-based trials are being conducted, and human studies are planned. Collaboration with The Danish Cancer Society and the Institute of Chemistry, Bio- and Environment Technology on the molecular mechanisms in the polyp-inhibitory effects of carrot derived inhibitors will be expanded.
- The effect of up-skilled help through the treatment trajectory on colon cancer patients’ mental health. A feasibility study is underway and a randomized multicenter study is planned.

RESEARCH RELATED PROCEDURES & TECHNIQUES

G0 SECTION

- Intraperitoneal microdialysis
- Gene analysis
- Proteomics
- Advanced anorectal manometry
- Animal experimental studies
- Tension-stretch analyses on tissues

G1 SECTION

- Endoscopic ultrasound (EUS) guided diagnosis and intervention
- Endoscopic RF Ablation (esophagus, stomach, duodenum)
- Laparoscopic Ultrasound (LUS) guided dissection and biopsy
- LUS guided fiducial marking
- Endoscopic mucosa resection
- Endoscopic submucosal dissection
- Minimal Invasive Oesophagectomy
- Pressurized Intraperitoneal Aerosol Chemotherapy (PIPAC)
- Transgastric necrosectomy
• Advanced anorectal manometry
• Microdialysis
• Scintigraphy
• Ultrasound and Ultrasonic derived methods such as elastography
• Imaging fusion techniques
• Dual Energy Computer Tomography
• Transanal endoscopic microsurgery
• Endoscopic mucosa resection
• Endoscopic submucosal dissection
• Full Thickness resection device for flexible endoscopy (FTRD)

SCIENTIFIC PUBLICATIONS (PEER REVIEWED)

G2 SECTION

• Qvist N, Nybo M. The electronic health record is important in monitoring prophylactic drug side effects. Danish Medical Journal, 2015;177.
• Nielsen, Michael Friberg Bruun; Mortensen, Michael Bau; Detlefsen, Sönke. Desmoplasiens and pancreatic stellate cells importance in pancreatic cancer. Danish Medical Journal, Vol. 177, Nr. 34, 17.08.2015, s. 2-5.
• Gerleman, Roxana; Mortensen, Michael Bau; Detlefsen, Sönke. Desmoid Tumor of the Pancreas: Case Report and Review of a Rare Entity. International Journal of Surgical Pathology, Vol. 23, Nr. 7, 27.07.2015, s. 579-84.
• Al-Najami I, Ainsworth AP. Endoscopic ultrasonography is a valuable diagnostic tool in patients with incidental findings in the pancreas or bile ducts. Dan Med J. 2015 Mar;62(3).
• Ellebæk SB, Bjerring OS, Mandi B, Detlefsen S. Perivascular epithelioid cell tumours in the liver. Ugeskr Laeger. 2015 Feb 23;177(9):V10140527.

G2 SECTION


**POSTERS/ORAL PRESENTATIONS**

**G0 SECTION**

- Peterslund P, Qvist N, Hansen TP, Husby S, Detlefsen S. Human NEC cases show increased mast cell count and decreased T cell count in fetal small bowel specimens. Danish Pathology Society Annual Meeting, March, 2015.
- Peterlund P, Detlefsen S, Qvist N, Hansen TP, Husby S. Human NEC cases show increased mast cell count and decreased T-cell count in fetal small bowel specimens. Danish Paediatric Society's Child Days, June 2015 Rebild, Denmark.
- Poulsen K, Qvist N. Loperamide vs. Placebo’s effect on ileostomy output. A clinical randomized double blinded crossover study. Journal for Medical Student Research, March 2015, Nyborg.
- Qvist N. Not all CRC patients should be evaluated at MDT. Colorectal Day, June 2015, Aarhus.

**G1 SECTION**

- Joergensen MT, Gerdes AM, Sorensen J, Schaffalitzky de MO, Mortensen MB. Is screening for pancreatic cancer in high-risk groups cost-effective? Experience from a Danish national screening program. UEGW, September 2015.
• Joergensen MT, Gerdes AM, Sorensen J, Schaffalitzky de MO, Mortensen MB. Is screening for pancreatic cancer in high-risk groups cost-effective? Experience from a Danish national screening program. DSGH Annual Meeting, September, 2015, Hindsgavl.


• Mortensen MB. What is new with PIPAC? (Short Presentations), 2nd International Symposium on Pressurized IntraPeritoneal Aerosol Chemotherapy (PIPAC), Marien Hospital Herne, Ruhr-Universität Bochum, October 2015.

• Mortensen MB. Meeting Summary. ØGC Annual Meeting, November 2015, Copenhagen.

• Busse MJ, Ainsworth AP. Ten years of experience with open transgastric necrosectomy for organized pancreatic necrosis in acute pancreatitis. 11th EAHPBA Congress, April 2015, Manchester.

• Bjerring OS. Re-resection for cancer pancreatitis. Pancreasgroup, March 2015, Copenhagen.

• Mortensen MB. EUS training in Denmark. EDUCARE, December 2015, Copenhagen.

• Ainsworth AP. Treatment of malignant gastric outlet obstruction. What says the literature? Danish Surgical Society Annual Meeting, November 2015.

• Ainsworth AP. Ten years of experience with open transgastric necrosectomy for organized pancreatic necrosis in acute pancreatitis. Pancreasgroup, March 2015, Copenhagen.


G2 SECTION


• Qvist N. Stem-cells in surgery. Challenges in research and clinic. Stem Cell Symposium, December, 2015, University of Southern Denmark.


• Al-Najami I, Rancinger CP, Buijs M. Bastrup G. Dual energy computed tomography - A novel image technique to discriminate benign from malignant lymph nodes in rectal cancer specimens. Poster session presented at European Colorectal Congress, St. Gallen, Switzerland.


• Schultz, H., & Qvist, N. Patient involvement in pain management at acute abdominal pain. Poster session presented at 9th Congress of the European Pain Federation (EFIC), 2015, Vienna.

• Bastrup, G, 3rd ESO-ESSO Masterclass (invited speaker), March 7 – 12th 2015.

• Bastrup, G, "When the end is good ....." (invited speaker), Research day, April 2015, Odense University Hospital.

• Bastrup, G. How do we select patients for transanal excision? (invited speaker), Nordic Early Rectal Cancer Meeting, May, 2015, Bergen.

• Bastrup, G, Homedelivered Capsule Endoscopy (invited speaker), European Telemedicine Conference, October 2015, Odense.

• Riishede, M. Focused ultrasonography - does it increase the amount of correct presumptive diagnoses in the Emergency Department?: A study protocol. Poster session presented at International Student Research Forum, Aberdeen, 2015.

G3 SECTION

• Jensen JS, Antonsen HK, Durup J., Are there advantages of robotic assisted anti-reflux surgery? Danish Surgical Society Annual Meeting, November 2015.