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ter immediate than after delayed reconstruction. At least 13% of patients who have conservation are unhappy with the cosmetic result and some of these patients require reconstructive surgery. Techniques available for breast reconstruction include the use of prostheses, tissue expanders and myocutaneous flaps. Selection for different technique is based on breast size and patient's preference.

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## Tumor prosthesis in bone sarcomas

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Introduction: Improved patient prognosis and better local control of the tumor widened the indications to limb salvage. Endoprosthetic devices allow for one early weight bearing and good functional results.

Purpose: To review the experience of the Rizzoli Institute with the use of tumor prostheses in bone tumor surgery.

Methods: From April 1983 to June 1995 475 prostheses were used for reconstruction in patients with bone tumors. Most frequent histotypes were osteosarcomas (298) and, chondrosarcomas (52). Locations were the proximal femur (73), distal femur (280), proximal tibia (97), femur and tibia (5), total femur (7), proximal humerus (7), elbow (4), total humerus (2). Modular Replacement prosthetic system was used (HMRS from Howmedica). Since 1989 allograft prosthesis composites were preferred in proximal humerus (5), proximal femur (22) and proximal tibia (19). Functional analyses (according to the MSTS) was performed.

Results:In prosthetic reconstructions major complications included infections (8%) and wearing of the polyethylene bushes. In APCs fracture of the greater throcanter (4%) and post-traumatic patellar tendon detachment (4%) were observed. There were 37 local recurrences (7%), 136 pulmonary metastases (26%) and 43 skeletal metastases (8%). Functional results were good or excellent in most of the cases.

Conclusion: The uncemented modular prosthetic system offered versatility and good functional results after tumor resections. APCs allowed better functional results due to the anchorage of tendons and soft tissues.

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## Sphincter preserving surgery for rectal cancer

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Avoiding permanent colostomy has been a challenge in rectal cancer surgery for many years. Only recently exact measurement of postoperative function and of quality of life gained more interest.

Local excision in early tumor stages is well accepted, but questioned for more advanced tumors. The role of additional radiotherapy is not clear. For rectal resection the clear distal margin has been defined. Wide experience has been gained performing low supraanal or perianal anastomoses.

Even partial resection of the sphincter muscle has been done to avoid colostomy. The importance of lateral margins has been addressed by Dr. Heald who introduced the technique of TME. Establishing coloanal pouch procedures has been an important step to improve the functional results of low anastomoses.

Quality of life after rectal cancer surgery includes the postoperative function of genitourinary nerve as well. Nerv preserving surgery must be attempted, but it is not always possible in very low tumors.

There is a consensus to include radiotherapy and chemotherapy within a multimodal concept in advanced rectal cancers. Morbidity of the combined approach is higher for the postoperative irradiation.

Local relapse however represents the severest cut down on quality of life.

There should be no compromise regarding distal and lateral clearance and combined modality treatment to achieve durable local control.

Quality of life in rectal cancer reflects more than sphincter preserving surgery, good functional results and relapse free survival. Competent care of physical problems and attention to coping difficulties are important as well.

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## Staging laparoscopy for gastro-intestinal tract malignancies

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Background: Preoperative treatment planning should be based on detailed staging. Moreover, exploratory laparotomies should be avoided in palliative situations and operations be performed with minimal morbidity not to compromise the limited survival time of those patients. Operative laparoscopy can contribute to both aims.

Patients and Methods: 277 patients underwent laparoscopy for cancer of the esophagus, stomach, pancreas, rectum, or liver from 1993–96. In addition, we used laparoscopic ultrasound in 124 patients to detect liver and lymph node metastases, and to assess whether the tumor infiltrated to major vessels.

Results: We detected intraabdominal metastatic spread unknown from imaging procedures in 5%–34% of our patients depending on the primary tumor. As a consequence, the initial treatment concept had to be modified in 9% to 29% of them. The gain of information on tumor spread by staging laparoscopy was best in patients with esophageal and pancreatic cancer. Palliative procedures by laparoscopy (gastro-enterostomy, bilio-digestive drainage, jejunal feeding tube, colostomy) could be performed in 33 patients, thus avoiding laparotomy.

Conclusion: Staging laparoscopy offers an optimum of information about intraabdominal spread of GI-tract tumors if combined with laparoscopic ultrasound. It should be mandatory in neoadjuvant phase II and III trials to improve the quality of treatment with curative intent. It also may contribute to an improved quality of life in palliative situations detecting incurable situation and avoiding laparotomy.