the utility of TIMP-1 as a marker of response to conventional chemotherapy.

The authors suggest that the addition of a TIMP-1-inhibiting treatment could prove effective for patients not responding to conventional chemotherapy. It is, however, important to confirm that TIMP-1 is inhibiting apoptosis in these patients, rather than just correlating with aggressive phenotype.

Original article Schrohl A-S *et al.* (2006) Primary tumor levels of tissue inhibitor of metalloproteinases-1 are predictive of resistance to chemotherapy in patients with metastatic breast cancer. *Clin Cancer Res* **12:** 7054–7058

Tumor downstaging is prognostic following treatment for rectal cancer

Surgery for rectal cancer is associated with a high rate of recurrence (50–70%) when the cancer is fixed on presentation. Neoadjuvant chemoradiation can reduce the tumor volume and pathologic tumor stage of locally advanced rectal cancer, increasing the likelihood of curative surgical resectability and improving long-term oncologic outcomes. A retrospective analysis has shown that the pathologic tumor stage after curative resection and neoadjuvant chemoradiotherapy correlates highly with outcome in locally advanced and fixed rectal cancer.

Data were assessed from 114 patients with advanced (stage T3 or T4, N-positive) rectal cancer who had undergone chemoradiation (5,040 cGy in 25 fractions over 5 weeks, with intravenous 5-fluorouracil and leucovorin during weeks 1 and 5), followed 4–6 weeks later by tumor-specific mesorectal excision. Tumors were staged using the pathological tumor–node–metastasis (TNM) system.

Recurrence and 5-year survival rates both correlated positively with pathologic stage. While patients in pathologic complete remission had a highly favorable prognosis, with 100% (10/10) still alive at 5 years, stage II and III patients had overall survival rates of 56.8% and 42.3%, respectively, and disease-free survival rates of 49.7% and 33.6%. In multivariate analysis, pathologic nodal stage and the operative method both independently affected survival, and the authors propose that pathologic nodal status following irradiation has the strongest effect on oncologic outcomes. Longer follow-up is, however, required before a definitive relationship between pathologic complete remission and a favorable prognosis can be inferred.

Original article Kim NK *et al.* (2006) Oncologic outcomes after neoadjuvant chemoradiation followed by curative resection with tumor-specific mesorectal excision for fixed locally advanced rectal cancer: impact of postirradiated pathologic downstaging on local recurrence and survival. *Ann Surg* **244:** 1024–1030

Hepatic resection could improve care of patients with breast cancer liver metastases

A study of hepatic resection (HR) in women with breast cancer liver metastases (BCLM) concludes that the procedure can increase survival compared with medical therapy alone. BCLM is present in as many as 50% of patients with stage IV breast cancer, but the poor prognosis of these patients and the fact that most also have extrahepatic metastases mean that HR is generally avoided in favor of a less aggressive procedure. The safety data from this study are, however, encouraging.

Major hepatectomy or minor resection was performed in 85 patients with resectable hepatic metastases; all had previously received treatment. A third of patients had prior or current extrahepatic disease. Following surgery, 28 (33%) patients had isolated hepatic recurrences, 12 of whom underwent repeat hepatectomy; 71 patients were given postoperative systemic therapy. With systemic therapy alone, median survival is reported at 3–15 months; here, the median postoperative survival was 32 months and the 5-year overall survival rate 37%. Disease-free survival data were also promising (median 12 months, 5-year rate 17%). Repeat hepatectomy was associated with improved survival, while an R2 resection and failure to respond to preoperative chemotherapy were independently associated with poor survival. Complications occurred in approximately a quarter of patients, and the median postoperative hospital stay was 9 days.

The authors urge that HR is considered alongside systemic therapy in patients with macroscopically resectable BCLM who have responded to chemotherapy, even if they have limited extrahepatic disease, if this is medically controlled or surgically resectable.

Original article Adam R *et al.* (2006) Is liver resection justified for patients with hepatic metastases from breast cancer? *Ann Surg* **244:** 897–908