

Medium term results of laparoscopic colorectal surgery from a National Training Centre

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Introduction:

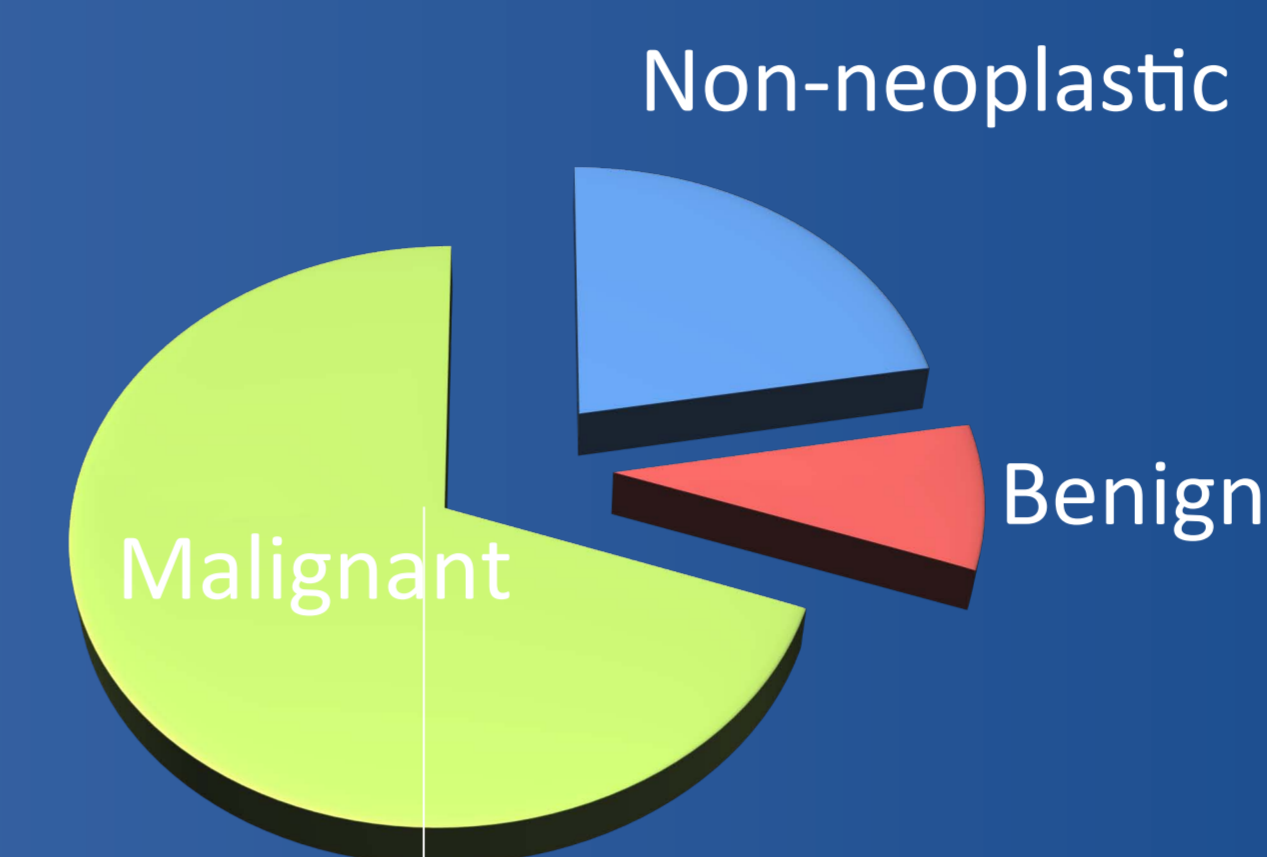
Since its initial description in 1991, laparoscopic colorectal surgery has become the preferred method for colorectal resection. Repeated studies have illustrated that laparoscopic surgery is associated with lower morbidity compared to open surgery with reduced hospital stay and faster return to normal activities. We present the findings from our prospectively collected database from July 2003 to July 2011. We also specifically analysed data for the subgroups of patients over the age of 80 years and those with high predicted mortality and morbidity using the P-Possum tool.

Methods:

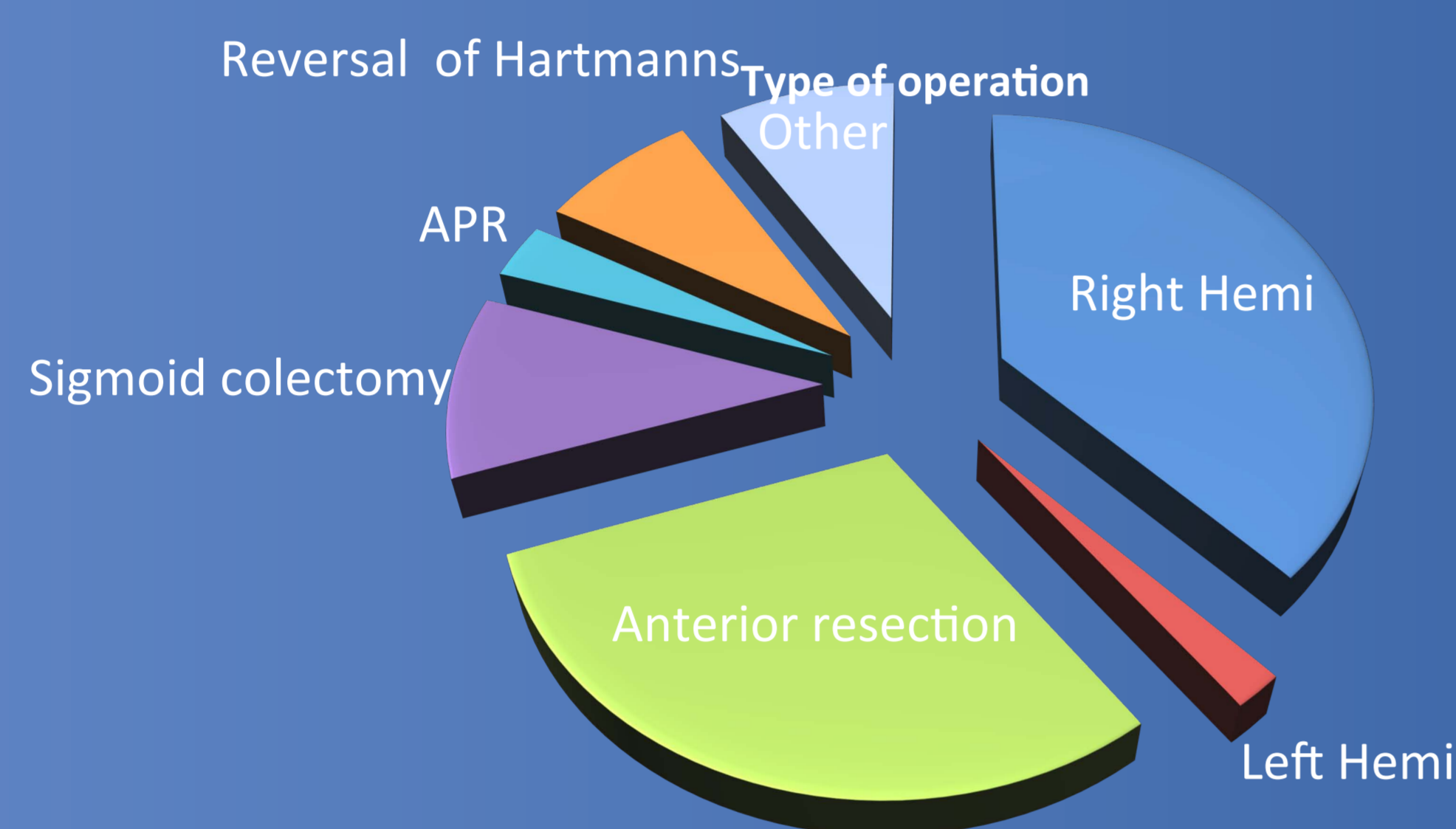
Between July 2003 and July 2011, all patients undergoing elective laparoscopic colorectal surgery were included prospectively in a database. Patients were admitted under the care of one of four colorectal consultants. Patients were followed up in colorectal clinics post-operatively. Morbidity was defined as any illness within a 30-day post-operative period, whether surgical or otherwise. 30-day post operative mortality and return to theatre were also recorded prospectively. Follow-up data, including local or distant recurrence and death from cancer was recorded.

Demographics:

258 males, 250 females
Mean age 65.5 years (range 19-95 years)
Median BMI 27 (range 14.9-46)

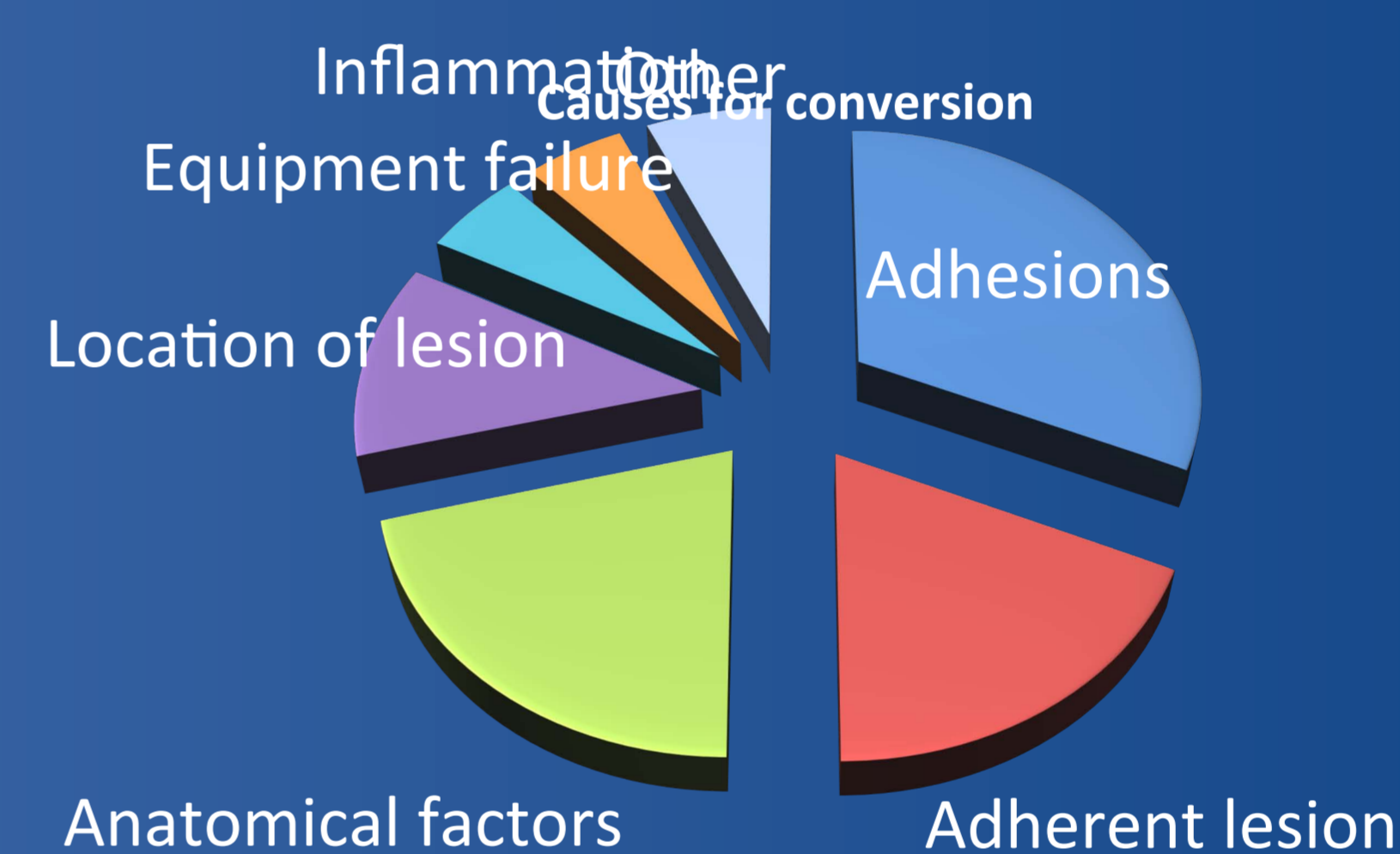


Median lymph node yield 13.8
>66% cases had >12 lymph nodes
97.5% cases R0



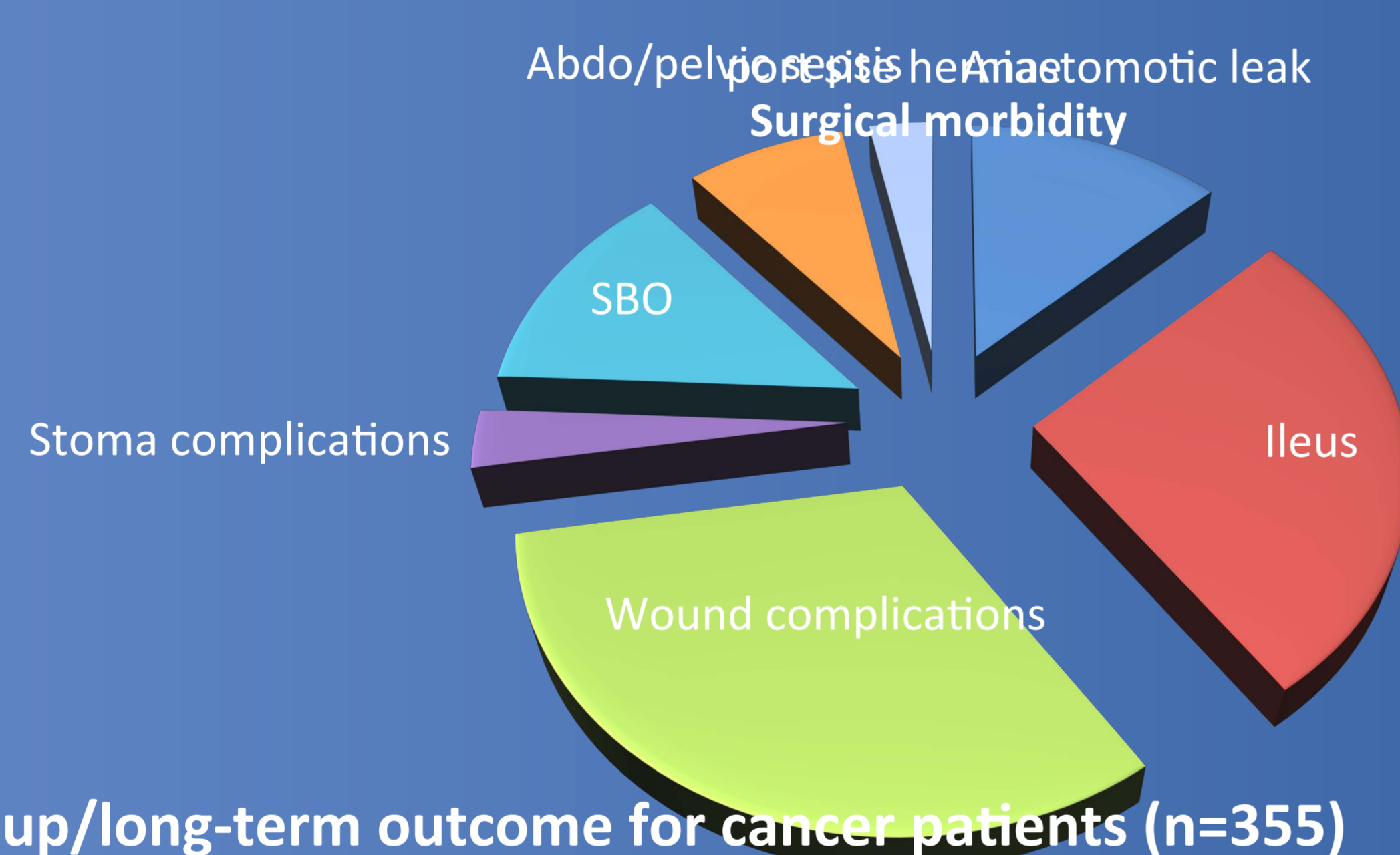
Operation data:

Mean operative time 175 minutes (range 50-465 minutes)
Mean intra-operative blood loss 220mls (median 101mls)
Conversion rate – 15% (n=76)



Mean length of post-operative stay 5.8 days (range 1-81 days)

- Laparoscopically completed patients – 3.5 days
- Converted patients – 8 days
- Difference highly significant (p<0.001)



Morbidity/mortality

30-day morbidity 23% (n=117)

- Surgical morbidity 6% (n=32)
- Medical morbidity 17% (n=85)
- In converted patients, morbidity 38% (significant difference, p<0.05)

30-day mortality 1.6% (n=8)

30-day re-admission rate 4.9% (n=25)

30-day re-operation rate 2.8% (n=14)

Follow-up/long-term outcome for cancer patients (n=355)

Mean length of follow-up 2.3 years

Local recurrence rate 4.2% (n=15)

- Death from local recurrence 1.77% (n=9)

Distant recurrence rate 13.2% (n=47)

- Three of these patients are well – two partial hepatectomies, one groin dissection for isolated lymph node metastasis

Death from cancer 10.4% (n=37)

A further 11 patients (3.1%) are alive with cancer and under palliative care

Octogenarians (n=74)

Age range (80-94)

45 females, 29 males

Higher proportion of right hemicolectomies in this group (52% vs 37%)

- No significant difference in operating times (164 vs 175 minutes)
- No significant difference in 30-day morbidity (23% vs 23%)
- No significant difference in 30-day mortality (4.05% vs 1.6%)
- Significantly longer length of stay in this group (7 days vs 5.8 days, p=0.04)

Patients with P-Possum predicted mortality >5% (n=23)

No 30-day mortalities in this group

30-day morbidity 8% (predicted 70.1% by P-Possum), not significantly different from rest of the series

Significantly longer hospital stay in this group (8 vs 5.8 days, p=0.004)

Conclusions:

Our results compare favourably with other published series:

- Conversion rate 15% - Veldkamp et al. (17%), Senagore et al. (12.1%), Belizon et al. (19.6%)
- Mean operating time 175 minutes – Schwenk et al. 88-275 minutes

These results demonstrate no significant difference in outcome from laparoscopic surgery in octogenarians or in patients with high predicted mortality. The length of stay post-operatively for both these groups is higher than the rest of the series.

We conclude that laparoscopic colorectal surgery is safe in our hands and should be offered to all patients regardless of age and co-morbidities.