

**Sustained reduction in length of stay
for patients undergoing major upper
gastrointestinal resections with
introduction of an enhanced recovery
package and a minimally invasive
operative technique**

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on behalf of

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Background

- 3,612 oesophagectomies and gastrectomies in England & Wales annually (1)
- Approximately 4% 30 day mortality
- 40% serious post-operative complication
- Traditionally conservative post-operative management
- Prolonged in-patient stay

1 www.augis.org 2010 Audit Report. Accessed 21st August 2011

Nottingham experience

- Second largest centre in UK
- 180 oesophagectomies and gastrectomies annually
- Conducted by upper GI and thoracic surgeons
- Local 30 day mortality comparable with national average (1)
- In patient stay of 15 days (comparable with other major centres)

- ERAS programme tailored to oesophagectomies conducted by upper GI surgeons implemented in August 2009

Nottingham Upper GI Surgeons Oesophagectomy ERAS Programme

- Day of surgery
 - Respiratory exercises start and continue daily
- Day 1
 - Aim to leave HDU
 - Sitting out
- Day 2
 - 10m walk
 - 1st chest drain out
- Day 3
 - Two 20m walks
- Day 4
 - Three 30m walks
- Day 5
 - Two length of ward walks
 - 2nd chest drain out
 - Epidural/paravertebral analgesia off
 - Urinary catheter out
 - Oral fluids building to nutritional fluids
- Day 6
 - Three independent 30m walks
- Day 7
 - Home

Minimally invasive surgical technique

- September 2010
- Laparoscopic mobilisation of stomach and gastro-oesophageal junction
- Allowed change from epidural to paravertebral analgesia

Results - Oesophagectomy

	Number of patients	Median length of stay - days (IQR)	p-value
Pre-ERAS (Aug 2008 - July 2009)	53	15 (12-24)	
Post-ERAS (Aug 2009 - July 2010)	55	11 (8-15.5)	<0.001
Minimally invasive surgery (Aug 2010 - April 2011)	34	8 (7-12)	<0.001
Minimally invasive and completed ERAS programme	19 (56%)	7 (7-8)	

Conclusions

- Introduction of ERAS programme has reduced in-patient stay after major upper GI surgery
- Updating the ERAS programme as new surgical techniques have been introduced has continued to significantly reduce in-patient stay