

**CS-15****Dedrick Kok Hong Chan<sup>1</sup>, Ker-Kan Tan<sup>1,2</sup>**<sup>1</sup> *Division of Colorectal Surgery, University Surgical Cluster, National University Health System*<sup>2</sup> *Department of Surgery, Yong Loo Lin School of Medicine, National University of Singapore***Laparoscopic surgery should be considered in T4 colon cancer**Background

Laparoscopy in T4 colon cancers is not widely advocated due to concerns regarding safety and oncologic efficacy. We conducted this study to compare the short and long term oncological outcomes between laparoscopic and open approaches in T4 colon cancers

Methods

A retrospective analysis of all patients who underwent surgery for T4 colon cancer from 2008 to 2014 was performed. Margin positive rate, lymph node yield, local or distant recurrence and overall survival were analysed.

Results

A total of 59 patients received open surgery, whilst 93 underwent laparoscopic surgery, with a conversion rate of 8.6%.

There was no difference in the various measured outcomes between the laparoscopic and open groups. The relative risks of positive margins and inadequate lymph node yield for staging were 0.95(0.74–1.23, p=0.692) and 1.01(0.97–1.05, p=0.710), respectively for the laparoscopic group when compared to the open approach.

Regarding long term outcomes, the relative risk of local recurrence in the laparoscopic group was 0.99(0.96–1.02, p=0.477), while there were also no increased risks of developing distal recurrences at the liver (RR1.19, 0.51–2.82, p=0.684), lungs (RR1.20, 0.50–2.87, p=0.678) and peritoneum (RR 1.22, 0.51–2.95, p=0.653) in the laparoscopic group.

There was also no difference in the overall survival (RR0.70, 0.42–1.16, p=0.168). Patients were followed up for a median of 73.3 months (range 34.8-144.7).

Conclusion

Laparoscopic surgery does not compromise oncological outcomes in T4 colon cancers compared to the open approach. Because of its proven associated benefits, laparoscopy should be considered in selected T4 colon cancers.

**CS-16****Dedrick Kok Hong Chan<sup>1</sup>, Tian-Zhi Lim<sup>1</sup>, Ker-Kan Tan<sup>1,2</sup>**<sup>1</sup> *Division of Colorectal Surgery, University Surgical Cluster, National University Health System*<sup>2</sup> *Department of Surgery, Yong Loo Lin School of Medicine, National University of Singapore***T4N0 colon cancers should be treated like T3N1 disease**Background

Patients with positive lymph nodal involvement in colon cancer have always been deemed to fare worse than those without. However, questions have been increasingly raised on the true prognosis of T4N0 disease. We conducted this study to investigate how T4N0 disease would compare with T3N1 disease.

Methods

All patients with colon cancer treated from 2008 to 2014 was collected. Preoperative, intraoperative and histological information was compared between patients with T4N0 and T3N1 disease. Variables which significantly differed were included in multivariate analysis for recurrence and survival. Kaplan Meier curves and cox regression analysis for time to recurrence and survival were evaluated.

Results

Seventy-eight patients had T4N0 colon cancer, while 160 had T3N1 disease. Vascular invasion, lymphatic invasion, total lymph node yield, and the administration of adjuvant chemotherapy were identified as variables for evaluation. Over a median follow up of 41.4 (range 21.6 – 65.0) months for T4N0 patients and 42.4 (range 21.1 – 63.8) months for T3N1 patients, there was no statistical significant difference in the association of stage of cancer with survival (OS: 0.97 (0.38 – 2.45),  $p= 0.94$ ). Kaplan Meier curves also showed no difference in time to death ( $p= 0.25$ ). There was no statistical significant difference in the time to death (HR 0.56(0.20 – 1.55),  $p= 0.26$ ).

Conclusion

T4N0 colon cancers have similar outcomes to T3N1 disease and should be considered as Stage III disease in future classification. Patients diagnosed with T4N0 disease should receive similar treatment as those with T3N1 disease and counselled accordingly.

**CS-17****Dedrick Kok Hong Chan<sup>1</sup>, Faith Qi-Hui Leong<sup>1</sup>, Ker-Kan Tan<sup>1,2</sup>**<sup>1</sup> *Division of Colorectal Surgery, University Surgical Cluster, National University Health System*<sup>2</sup> *Department of Surgery, Yong Loo Lin School of Medicine, National University of Singapore***Anal adenocarcinoma can masquerade as chronic anal fistula**Background

Perianal adenocarcinoma arising from chronic anorectal fistulae is a rare condition of which the natural history and optimal management are not well established.

Methods

A retrospective analysis of five consecutive cases of perianal adenocarcinoma arising from chronic anorectal fistulae was conducted.

Results

Five patients with anal adenocarcinoma arising from chronic anorectal fistula were identified. Median age of diagnosis was 64 years (range 55 to 72). Magnetic Resonance Imaging (MRI) was the initial investigation for all patients, which showed a hyperintense T2-weighted image.

One patient underwent abdominoperineal resection following neoadjuvant chemoradiotherapy. This patient remained disease free following 12 months of follow up. Three patients received neoadjuvant therapy with an intent for surgery but did not go through with surgery either due to worsening of their health or metastatic spread. One patient declined intervention. Among these patients, the median overall survival is 10.5 months (range 2 – 19).

Conclusion

A high index of suspicion is required to make a clinical diagnosis of anal adenocarcinoma arising from chronic fistulae. Histologic diagnosis must be achieved to confirm the diagnosis. Multimodal therapy with neoadjuvant chemoradiotherapy followed by abdominoperineal resection is the treatment of choice.

Dedrick Kok Hong Chan<sup>1</sup>, Tian-zhi Lim<sup>1</sup>, Ker-Kan Tan<sup>1,2</sup>

<sup>1</sup> Division of Colorectal Surgery, University Surgical Cluster, National University Health System

<sup>2</sup> Department of Surgery, Yong Loo Lin School of Medicine, National University of Singapore

## **Endoscopic stenting does not worsen long term outcomes amongst patients presenting with obstruction from colorectal cancers**

### Background

Stenting has been increasingly adopted in colorectal cancer patients presenting with acute large bowel obstruction. However, long term outcomes of stenting is lacking in the literature. Our study attempts to compare the long term outcomes of colonic stenting and emergency surgery amongst left-sided colorectal cancer patients presenting with acute large bowel obstruction.

### Methods

A retrospective review of all patients who presented with non-metastatic colorectal cancer who underwent either endoscopic stenting or emergency surgery for acute large bowel obstruction was performed from January 2007 to April 2016. Patients were analysed in an intention to treat analysis.

### Results

Forty-seven (46.1%) patients underwent emergency surgery whilst 55(53.9%) underwent colonic stenting with a technical success rate of 71.0%.

Patients who underwent emergency surgery were more likely to develop severe complications when compared to patients who underwent successful colonic stenting, but the difference was not statistically significant (OR, 2.84, 95% CI: 0.71–11.3, p=0.139).

Patients were followed up for a median of 48.3 months (3.1-111) in the stenting group and 51.2 months (1.2-117.1) in the emergency surgery group. Recurrence rates between colonic stenting and emergency surgery were similar (25.6 vs 21.3%, p=0.500), with more anastomotic and peritoneal recurrences were noted in the emergency surgery group. 5 year disease free survival (77 vs 73%, p=0.708) and overall survival (86 vs 62%, p=0.064) were also similar.

### Conclusions

Patients who underwent endoscopic stenting for large bowel obstruction have comparable long term outcomes as those who undergo emergency surgery. The role of endoscopic stenting in obstructed colorectal cancers merits further evaluation.

**CS-19**

**Jia-Hao Law<sup>1</sup>, Frederick H Koh<sup>1</sup>, Ker-Kan Tan<sup>1,2</sup>**

*1 Division of Colorectal Surgery, University Surgical Cluster, National University Health System*

*2 Department of Surgery, Yong Loo Lin School of Medicine, National University of Singapore*

**Young Colorectal Cancer Patients Often Present Too Late**Background

Current screening and health education strategies on colorectal cancer (CRC) remain focused on individuals > 50 years old. However, CRC in young adults is not uncommon. This paper aims to explore how CRC presents in young adults and their clinical outcomes.

Methods

All patients aged < 50 years diagnosed with CRC from January 2007 to December 2015 were reviewed. Patient demographics, clinical symptoms and outcomes of treatment were collected.

Results

Of 1367 patients diagnosed with CRC, 154 (11.6%) were aged < 50 years. The median age of diagnosis was 45 years (range: 19 – 49). The majority (61%) of the patients presented acutely via the emergency department and the 3 most common presenting symptoms were abdominal pain (n=94; 61.0%), change in bowel habits (n=74; 48.1%) and per rectal bleeding (n=69; 44.8%).

Most of the primary cancers were left sided (n = 122, 79.2%) in location and 33 (21.4%) patients had metastatic disease on presentation. 138 (89.6%) patients were treated with curative intent, including 17 (51.5%) with metastatic disease on presentation. There were 31 (22.5%) patients who developed disease recurrence at a median duration of 10.0 (range, 0.5 – 94.0) months. The younger group (< 45 years old) were more likely to present acutely and had more aggressive tumour biology

Conclusions

The majority of young CRC patients present acutely and their presenting symptoms are often vague. There is a need to educate young adults on the possibility of harbouring CRC and its typical presenting symptoms to enable earlier detection.

**CS-20****Frederick H Koh<sup>1</sup>, Jia-Hao Law<sup>1</sup>, Ker-Kan Tan<sup>1,2</sup>**<sup>1</sup> *Division of Colorectal Surgery, University Surgical Cluster, National University Health System*<sup>2</sup> *Department of Surgery, Yong Loo Lin School of Medicine, National University of Singapore***Characteristics and Outcomes of Metastatic Colorectal Cancer in the Young Population**Background

A significant proportion of patients with colorectal cancer (CRC) presents with metastatic disease and have a high rate of recurrence. In younger patients, a more aggressive approach is often adopted in an attempt to achieve cure and improve survival. The aim of this paper is to review the management and outcomes of young patients with CRC who presented with metastatic disease.

Methods

All patients under 50 years diagnosed with CRC in a single institution from January 2007 to December 2015 were reviewed. Patient demographics, details of their treatments, progress and outcomes of treatment were collected for our review.

Results

There were 154 newly diagnosed CRC patients who were < 50 years old during the study period. Thirty-three patients (21.4%) had stage IV disease on presentation. Of the 17 patients (51.5%) who were treated with curative intent, 9 (27.3%) patients underwent upfront surgical resection alone and 8 (24.2%) patients had neoadjuvant therapy followed by surgical resection. Among the 16 patients who were treated with palliative intent, 5 (31.3%) had surgical resection while 11 (68.8%) had definitive chemo- or radio- therapy.

When comparing between the two groups, the median survival of Stage IV CRC patients who were managed with curative intent was 29.0 months (range, ?? ) while patients who were treated with palliative intent had a median survival of 24.0 (range, 0.5 – 47.5 months) months. There was no significant difference in their median survival ( $p=0.094$ ).

Conclusions

Young CRC patients with stage IV disease typically survive for 2 years upon diagnosis. Those who were treated and underwent surgery with curative intent have comparable survival compared to those treated with palliative intent. The role of surgery in these patients merits further evaluation.

Frederick H Koh<sup>1</sup>, Dedrick Chan<sup>1</sup>, Jingyu Ng<sup>1</sup>, Ker-Kan Tan<sup>1,2</sup>

<sup>1</sup> Division of Colorectal Surgery, University Surgical Cluster, National University Hospital, National University Health Systems, Singapore, Singapore

<sup>2</sup> Department of Surgery, Yong Loo Lin School of Medicine, National University of Singapore, Singapore, Singapore

## Adherence to surveillance guidelines following Colonic polypectomy is abysmal

### Background

Surveillance guidelines following excision of colonic tubular adenomas are well established. However, adherence to the guidelines are not always practiced. The aim of our study was to evaluate the rate of compliance to the recommended guidelines following polyp removal.

### Methods

A review of a prospectively collected colonoscopy database in a single tertiary institution was conducted for all patients who underwent polypectomy in 2008. We excluded patients who were diagnosed with or had prior history of colorectal malignancy. The frequency of subsequent colonoscopic evaluation performed for these patients were evaluated against the recommended guidelines based on the histology of the removed polyps to evaluate compliance.

### Results

There were 448 colonoscopies with polypectomies were performed in 2008, in a patient cohort of median age 60 years (26 – 95), with the most common diagnosis being tubular adenoma with low grade dysplasia (n= 292, 65.2%).

Adherence to post-polypectomy surveillance guidelines based on the factors such as the characteristics of the colonic polyps, bowel preparation at initial colonoscopy was only 13.6% (n=61).

There were 26.4% (n=118) of patients who had surveillance endoscopy earlier than recommended and none of them were diagnosed with malignancy. The majority of patients had surveillance scopes later than recommended or were lost to follow-up (n=203, 45.4%), of these patients, 2 patients were found to have malignancy subsequently 3 years and 5 years after their recommended surveillance scope date respectively.

### Conclusion

There is a fairly low compliance to post-polypectomy surveillance guidelines, although the incidence of delayed colorectal cancer remains low. More needs to be done to improve compliance to guidelines amongst both patients and clinicians.

**CS-22**

**Jing-Yu Ng<sup>1</sup>, Frederick H Koh<sup>1</sup>, Danson Yeo<sup>2</sup>, Sheldon Jin-Keat Ng<sup>3</sup>, Kok-Yang Tan<sup>2</sup>, Ker-Kan Tan<sup>4,5</sup>**

<sup>1</sup> *University Surgical Cluster, National University Health System*

<sup>2</sup> *Division of Colorectal Surgery, Department of Surgery, Khoo Teck Puat Hospital*

<sup>3</sup> *Department of Diagnostic Imaging, National University Health System*

<sup>4</sup> *Division of Colorectal Surgery, Department of Surgery, National University Health System*

<sup>5</sup> *National University of Singapore*

### **Patients need to know that ileostomy following anterior resection may not be reversed**

#### Background

Diverting ileostomies are often created following low colorectal anastomosis to reduce the clinical consequences of an anastomotic leak. Whilst many patients are advised that these ileostomies are temporary, it may not often be the case.

The purpose of this study was to look at the actual reversal rates of diverting ileostomy following anterior resections performed for malignancy and the reasons for delayed or non-reversal.

#### Methodology

A retrospective review of data was performed. Patients who underwent anterior resection with a diverting ileostomy for cancer-related resections within the study period (Mar 2011 to Mar 2013) formed the study group. They were then followed up for at least 3 years to identify the real ileostomy reversal rates.

#### Results

A total of 82 patients had a diverting ileostomy following anterior resection within the study period. Sixty-one (74.4%) patients had a reversal before Mar 2016. The median time to reversal was 17 months (2 – 47 months). One patient (1.6%) had anastomotic leaks post ileostomy reversal requiring surgery and 1 patient (1.6%) had significant per rectal bleeding requiring hospitalization.

Patient choice represented the most common reason for non-reversal of ileostomies (7 out of 21 patients, 33.3%). This was followed by cancer-related disease progression (6 out of 21 patients, 28.6%).

#### Conclusion

One in 4 diverting ileostomies performed following anterior resection for malignancy is not reversed. The interval time to its closure is often longer than typically expected. Patients should be made aware of the significant possibility of non-reversal

**CS-30**

Tian-Zhi Lim<sup>1</sup>, Jing-Yu Ng<sup>1</sup>, Frederick Hong-Xiang Koh<sup>1</sup>, Dedrick Kok-Hong Chan<sup>1</sup>, Ker-Kan Tan<sup>1,2</sup>

<sup>1</sup> Division of Colorectal Surgery, University Surgical Cluster, National University Hospital, National University Health System, Singapore

<sup>2</sup> Department of Surgery, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

**The burden of keeping a diverting ileostomy: Are there hidden costs?**Background

Diverting ileostomies have been created for faecal diversion and these stoma has its own set of challenges and complications. This study aims to compare the burden of non-stoma closure of diverting ileostomies and attempts to derive a time opportunity for ileostomy closure.

Methods

A retrospective review of all patients who had a diverting ileostomy created was performed. The patients were categorized into (1) reversal and (2) non-reversal groups. Data variables were collected till stoma reversal. All hospital admissions associated to stoma related complications were used to measure the burden of non-stoma closure.

Results

Between January 2011 to June 2016, we identified 193 patients, median age 65 (range: 22 – 94, years), who had a diverting ileostomy created. Forty five (23%) patients had their diverting ileostomies created emergently. The most common reason for ileostomy creation was faecal diversion in patients who underwent an anterior resection with a low anastomosis (71%). Two thirds (67%) of the patients eventually had their ileostomy reversed, at a median duration of 7.3 (range: 1 – 35.5, months). In the reversal group, patients tend to be younger ( $p < 0.05$ ) and predominantly male ( $p = 0.046$ ). Those patients who had their diverting ileostomies reversed were 3 times more likely to have had an initial elective surgery (95% confidence interval (CI): 1.6 – 6.4). The most common stoma related complication requiring hospital admission was dehydration secondary to high output stoma (73.3%). The proportion of patients who had stoma related complications were comparable (13.1% vs 20.6%) ( $p = 0.205$ ). The median cumulative length of stay for stoma related hospital admissions were also comparable (7 vs 8, days) ( $p = 0.659$ ).

Conclusion

The non-stoma closure burden was comparable between the groups. Diverting ileostomies should be reversed once utility of diversion is completed, as delaying closure would incur additional costs.

CS-31

Shortlisted for Poster Award Presentation

Tian-Zhi Lim<sup>1</sup>, Dedrick Kok-Hong Chan<sup>1</sup>, Melody Wen-Min Chow<sup>1</sup>, Ker-Kan Tan<sup>1,2</sup>

<sup>1</sup> Division of Colorectal Surgery, University Surgical Cluster, National University Hospital, National University Health System, Singapore

<sup>2</sup> Department of Surgery, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

### **Getting the First degree relatives to screen for Colorectal Cancer is harder than it seems**

#### Objectives

The aim of the study was to explore the various issues amongst the First Degree Relatives (FDR) of colorectal cancer patients precluding their adoption of screening colonoscopy.

#### Methods

A descriptive prospective qualitative design was adopted to meet the aim of this study. A semi-structured interview was conducted with each participant using open-ended questions. The required sample size was evaluated on an ongoing basis until data saturation was encountered.

Qualitative data collected from the interviews were analysed by thematic analysis. The identified themes were fundamental concepts that characterize specific experiences of individual participants by the more general insights that are apparent from the whole of the data.

#### Results

Twenty-nine FDRs were recruited from June 2015 to December 2015. Data saturation was reached at the 25th participant. The median age of the group was 48 years (range, 30 – 75 years). Approximately 90% of the interviewed participants were the patient's children. Interviews lasted between 5 and 20 minutes. The 3 main themes generated include a) Poor understanding of the colorectal cancer screening guidelines amongst the FDR of colorectal cancer patients; b) Health promotion efforts are lacking amongst medical professionals, and c) Several barriers for the uptake of screening colonoscopy were present, which included the fear of colonoscopy, the cost of the procedure, its associated inconvenience and the invulnerability mentality of the individual.

#### Conclusions

Numerous barriers are present amongst FDR of patients with colorectal cancers towards undergoing screening colonoscopy. A focused and tailored intervention strategy is integral to amend the behaviour of these higher risk individuals.

**CS-32**

Tian-Zhi Lim<sup>1</sup>, Dedrick Kok-Hong Chan<sup>1</sup>, Melody Wen-Min Chow<sup>1</sup>, Ker-Kan Tan<sup>1,2</sup>

*1 Division of Colorectal Surgery, University Surgical Cluster, National University Hospital, National University Health System, Singapore*

*2 Department of Surgery, Yong Loo Lin School of Medicine, National University of Singapore, Singapore*

**Colorectal cancer patients should be advocates of screening for their family and friends**Objectives

The aim of the study was to explore the various issues faced by colorectal cancer patients hindering them from being advocates for screening colonoscopy amongst their family and friends.

Methods

A descriptive prospective qualitative design was adopted to meet the aim of this study. A semi-structured interview was conducted with each participant using open-ended questions. The required sample size was evaluated on an ongoing basis until data saturation was encountered.

Qualitative data collected from the interviews were analysed by thematic analysis. The identified themes were fundamental concepts that characterize specific experiences of individual participants.

Results

Fifty colorectal cancer patients were recruited from June 2015 to December 2015. Data saturation was reached at the 45th participant. The median age of the group was 63 years (range, 40 – 85 years). Interviews lasted between 5 and 20 minutes.

The 3 main themes generated include a) Poor understanding of the colorectal cancer screening guidelines amongst colorectal cancer patients; b) Health promotion efforts are lacking amongst medical professionals, and c) Several barriers hindering advocacy include the view that screening is a taboo topic as it may be a harbinger for problems, the invulnerability mentality of the individual and the view that friends and siblings should have self-ownership over their health yet adopting a paradoxical protective approach towards their children.

Conclusions

Numerous barriers are present amongst colorectal cancers patients towards being advocates of screening. A focused and tailored intervention strategy is required to inculcate a positive and protective mental model amongst this group of patients.

CS-33

Shortlisted for Poster Award Presentation

Tian-Zhi Lim<sup>1</sup>, Dedrick Kok-Hong Chan<sup>1</sup>, Ker-Kan Tan<sup>1,2</sup>

*1 Division of Colorectal Surgery, University Surgical Cluster, National University Hospital, National University Health System, Singapore*

*2 Department of Surgery, Yong Loo Lin School of Medicine, National University of Singapore, Singapore*

### **Endoscopic stenting should be advocated in patients with Stage IV colorectal cancer presenting with acute obstruction**

#### Objectives

The aim of the study is to evaluate the outcomes of endoscopic stenting versus upfront surgery for patients with metastatic colorectal cancers presenting with large bowel obstruction.

#### Methods

A retrospective review of all patients with metastatic colorectal cancer who underwent either endoscopic stenting or emergency surgery for acute large bowel obstruction was performed.

#### Results

Between January 2007 and June 2014, 66 patients, median age, 64 (range, 25 – 96) years, presented with acute large bowel obstruction from metastatic colorectal cancer. Forty (60.6%) patients underwent endoscopic stenting whilst the rest received immediate upfront surgical intervention. Of the 40 patients, 29 (72.5%) were successfully stented. The remaining 11 (27.5%) patients who failed endoscopic stenting required immediate emergency surgery to relieve the obstruction. Patients who failed endoscopic stenting had worse complications than those patients who had their stents successfully inserted (Odds ratio, 23.3, 95% confidence interval, 2.29 – 250.00,  $p$ : 0.004). Patients who underwent emergency surgery had a longer median length of stay than patients who had successful endoscopic stenting ( $p$ : 0.003). The patients that underwent successful stenting had earlier commencement of chemotherapy compared to those who had upfront surgery ( $p$ : 0.02). There was no difference in stoma creation rates between patients who had emergency surgery versus those who were successfully stented.

#### Conclusion

Stenting is a safe option in patients with Stage IV colorectal cancer presenting with acute large bowel obstruction. Earlier commencement of chemotherapy occurs in patients who were successfully stented. Patients who failed stenting have equivalent outcomes to those who undergone upfront emergency surgery

CS-44

Shortlisted for Poster Award Presentation

**Dedrick Kok Hong Chan<sup>1</sup>, Ker-Kan Tan<sup>1,2</sup>**<sup>1</sup> *Division of Colorectal Surgery, National University Health System, Singapore*<sup>2</sup> *Yong Loo Lin School of Medicine, National University of Singapore, Singapore***Lower lymph node yield following neoadjuvant therapy for rectal cancer has no clinical significance**Background

Patients who received neoadjuvant therapy for rectal cancer are known to have a lower lymph node yield. The 7th edition of the American Joint Committee on Cancer requires at least 12 lymph nodes for accurate staging. We conducted this study to determine the clinical significance of evaluating <12 versus ≥12 lymph nodes on survival.

Methods

A retrospective analysis of all patients who received neoadjuvant therapy for locally advanced rectal cancer between April 2008 and July 2014 was conducted.

Results

In total, 217 patients were treated for rectal cancer within the above period. Median follow up was 23.4 months (interquartile range 9.0 – 40.5).

Sixty-three (29.0%) patients received neoadjuvant therapy. There was a statistically significant difference in the number of patients with an inadequate lymph node evaluation between patients who received neoadjuvant therapy and those who did not (27.0% vs 9.1%,  $p=0.001$ ).

On univariate analysis of patients who had received neoadjuvant chemotherapy, there was no difference in survival when comparing adequacy of lymph node yield (hazard ratio 1.07, 95% confidence interval 0.14 – 7.90), T-staging (1.45, 0.14 – 14.81), tumour grade (0.45, 0.04 – 5.24), vascular invasion (0.93, 0.13 – 6.88), lymphatic invasion (0.93, 0.13 – 6.88), and radial margin positivity (1.42, 0.12 – 16.04). On multivariate analysis with these determinants, there was still no difference in survival when comparing adequacy of lymph node yield (0.83, 0.05 – 13.6)