Answering the hard questions:
Rectal cancer outcomes measurement for
Illawarra Shoalhaven patients

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with Dr Sharlyn Kang, Brooke Selby, Dr Elias Nasser and Dr Daniel Brungs
1. Patients managed by this team receive evidence-based care

2. Patients are managed in a timely and efficient manner

3. The team communicates about the management of its patients with all the relevant stakeholders

4. The Tumour Program monitors the provision of care to its patients and measures patient outcomes

5. Effective leadership promotes multidisciplinary collaboration and TP development

6. The Tumour Program actively promotes education and research
Rectal cancer outcomes measurement project

International Consortium for Health Outcomes Measurement (ICHOM)

Standard Set for Colorectal Cancer

Cancer Institute NSW grant project
Collecting quality data: ISLHD Colorectal MDT

- Complete set of rectal cancer data for cohort diagnosed 2006-2017
- Total of 644 patients

Online MDT referral process

Pre-MDT data entry + live MDT documentation in MOSAIQ

Completing retrospective data

- Collection of outcome measures as part of ROUTINE CARE

Prospective collection of outcome measures
Outcomes measurement in everyday clinical practice

Follow-up protocol: colon and rectal cancer

Stage I and II
Surgery only

Colon cancer (no adj chemo)
Rectal cancer (no neoadj tmt)

Owner: Surgeon

Baseline

1 year

2 years

3 years

4 years

5 years

Outcomes measurement points (rectal cancer only)

Patient-reported

Patient-reported

Patient-reported

Patient-reported

Patient-reported

Patient-reported

Patient-reported

Patient-reported

Patient-reported

Patient-reported

Outcomes measurement in everyday clinical practice

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Patient-reported

Patient-reported

Outcomes measurement in everyday clinical practice
Outcome measures for rectal cancer

- Survival and disease control
- Disutility of care: short term complications
- Degree of health: patient reported measures
- Comorbidities
Answering the hard questions…

How effective is our care?
How likely is it that our patients’ disease will recur?
How much variation is there within our teams and across our District?
How does our care compare to other services in NSW, Australia and overseas?
How will the care we give impact on patients’ lives into the future?
We have an older population:

- 63% of our rectal cancer cohort is aged over 70
From individual patients to a cohort

The most common stage at diagnosis is stage III
Outcomes: survival and disease control

Overall survival by stage

Percent survival

months
Outcomes: Recurrence

Rates of rectal cancer recurrence in ISLHD:

<table>
<thead>
<tr>
<th>Type</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local</td>
<td>5.4%</td>
</tr>
<tr>
<td>Loco-regional</td>
<td>7.9%</td>
</tr>
<tr>
<td>Distant</td>
<td>20.5%</td>
</tr>
</tbody>
</table>
Benchmarking our recurrence rates


Local recurrence

- USA: 2.4%
- NL: 2.7%
- Denmark: 4.2%
- Sweden: 5%
- China: 6.2%
- UK: 7.3%
- Finland: 8.3%
- Brazil: 13.1%

ISLHD: 5.4%

Benchmarking our recurrence rates:

<table>
<thead>
<tr>
<th>Country</th>
<th>Recurrence Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>2.4%</td>
</tr>
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</tr>
<tr>
<td>Sweden</td>
<td>5%</td>
</tr>
<tr>
<td>China</td>
<td>6.2%</td>
</tr>
<tr>
<td>UK</td>
<td>7.3%</td>
</tr>
<tr>
<td>Finland</td>
<td>8.3%</td>
</tr>
<tr>
<td>Brazil</td>
<td>13.1%</td>
</tr>
<tr>
<td>ISLHD</td>
<td>5.4%</td>
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</tbody>
</table>


Benchmarking our recurrence rates

The value of the process

- Measuring outcomes puts a focus on every aspect of the care
  - Reducing variation against guidelines: standardised follow-up for colon and rectal cancer
  - Abreast of contemporary evidence-based approaches to management
  - System improvement in our region for rectal cancer diagnosis
Improving rectal cancer diagnosis and staging

MRI
- Standardised rectal MRI reporting across region

Histopathology
- Standardised synoptic reporting of histopathology across region
- Successfully advocated for routine use of additional stains to detect venous invasion
The power of outcomes data

Rates of local recurrence by surgeon

<table>
<thead>
<tr>
<th>Surgeon</th>
<th>% Local Recurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0%</td>
</tr>
<tr>
<td>B</td>
<td>2%</td>
</tr>
<tr>
<td>C</td>
<td>4%</td>
</tr>
<tr>
<td>D</td>
<td>6%</td>
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<tr>
<td>E</td>
<td>8%</td>
</tr>
<tr>
<td>F</td>
<td>10%</td>
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<tr>
<td>G</td>
<td>12%</td>
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<tr>
<td>H</td>
<td>14%</td>
</tr>
</tbody>
</table>

Overall local recurrence rate for ISLHD = 5.4%
Translating measurement into *improvement*

- Rectal cancer outcomes reporting framework

  - Diagnostic work-up/clinical staging
  - Treatment planning
  - Treatment
  - Pathological staging
  - Treatment complications
  - Quality of life
Translating measurement into improvement

- Rectal cancer outcomes reporting framework

<table>
<thead>
<tr>
<th>Measures</th>
<th>Collected via</th>
<th>Reported via</th>
<th>Target / benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Functional measures:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body image</td>
<td>EORTC QLQ CR29</td>
<td>12-monthly reports against benchmarks presented to Colorectal MDT clinicians</td>
<td>Comparable international quality of life studies, eg: Downing et al (2015) – study of 22,000 CR patients</td>
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<tr>
<td>Anxiety</td>
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<td>Weight</td>
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<tr>
<td>Sexual interest</td>
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<tr>
<td><strong>Symptom measures:</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Incontinence</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Pain</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Impotence</td>
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<td></td>
<td></td>
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<tr>
<td>Stoma problems</td>
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<tr>
<td>+ many more</td>
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Colorectal-specific quality of life

Diagnostic work-up/clinical staging → Treatment planning → Treatment → Pathological staging → Treatment complications → Quality of life
Translating measurement into *improvement*

- We are also:
  - Putting robust governance around data
  - Leveraging RBCO priorities
  - Integrating outcomes measures with District priorities and systems
  - Asking more questions: new studies springing from this work
Research into practice

Rectal cancer outcomes measurement steering committee

“This is not a study; it’s part of every day practice. It’s what we should all be doing as part of normal care.”