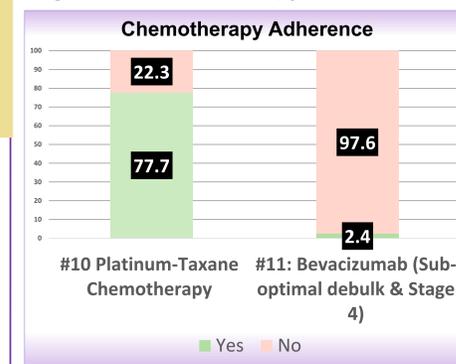# MEASURING QUALITY INDICATORS FOR QUALITY IMPROVEMENT: A STEP TOWARDS CREATING QUALITY OF CARE STANDARDS IN OVARIAN CANCER SURGERY

Vinitha Narasimhan[1], Dr Wentao Li[1,2], Dr Sara Yeoh[2], Dr Daniel L. Rolnik[1,2], Prof Ben W. Mol[1,2]
[1]Monash University Faculty of Medicine & Health Sciences
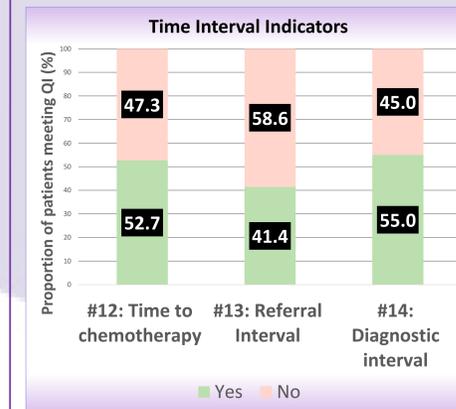[2]Monash Health: Department of Obstetrics & Gynaecology

BACKGROUND

Quality of Care (QoC): " *The degree to which health services for individuals and populations increase the likelihood of desired health outcomes* "

World Health Organization

- Within Australia there is limited research in Quality of gynaecological-oncology care.

- The National Gynae-Oncology Registry (NGOR) is developing a clinical quality registry (CQR) to work towards national QoC assessment in Australia through the use of quality indicators [1].

- Quality indicators (QI) allow measurement of care and are the basis for improving quality[2].

STRUCTURAL   PROCESS   OUTCOME

- At a hospital level: there has been no attempt at assessing the QoC provided in gynae-oncology at Monash health.

- Literature in this area is sparse and measuring QoC may be the first step in achieving quality improvement.[3]

RESEARCH QUESTION & OBJECTIVES

Can quality indicators in ovarian cancer be measured and used to monitor ovarian cancer management at Monash Health?

AIMS:

- To determine whether quality indicators can be applied in practice using **current clinical data**
- To establish a **system of quality monitoring** through quality indicator measurement
- To reveal **areas of change** in current ovarian cancer management that may facilitate quality improvement

METHODS:

Systematic Review Indicators[4] (n=138)

NGOR Indicators[3] (n=15)

QI Selection (Expert discussion)

11 NGOR + 3 Systematic Review Indicators

Analyze: Monash Health Cancer Registry Data

- **QI selection:**
  - 2 consultants & 1 fellow gynae-oncologist selected indicators through discussion
- **Data: Monash Health cancer registry**
  - 335 patients with **newly diagnosed epithelial** ovarian cancer

$$QI\ performance\ (\%) = \frac{Number\ of\ patients\ meeting\ the\ indicator}{Total\ number\ of\ eligible\ patients} \times 100$$

RESULTS:

Selected Indicators:

1. **Multidisciplinary Team (MDT) Meeting**: Newly diagnosed OTP cancer discussed at an MDT meeting
2. **Imaging**: Newly diagnosed patients who had CT and/or PET imaging to stage prior to commencing treatment
3. **Diagnosis**: Patients receiving first line neo-adjuvant chemotherapy (NACT) who have a histological/cytological diagnosis confirmed prior.
4. **Clinical trials:** Patients enrolled in an interventional clinical trial or translational research
5. **Operation report** (Residual disease): Operation reports with clear documentation of residual disease
6. **Primary debulking surgery** (PDS) - Optimal debulking in patients with advanced OTP cancer (stage ≥ IIB) undergoing PDS
7. **Interval debulking surgery** (IDS) - Optimal debulking in patients undergoing IDS
8. **Intra-operative events**: Unplanned significant intraoperative events.
9. **Post-operative 30-day adverse events** (AE): Serious AE classified as Clavien-Dindo ≥ grade III during the first 30 days after primary or interval surgery.
10. **First line chemotherapy**: First line chemotherapy with a platinum and taxane doublet
11. **First line chemotherapy**: Patients with sub-optimal debulking or stage IV disease who receive first-line chemotherapy with a platinum taxane doublet and bevacizumab.
12. **Timeliness of treatment**: Newly diagnosed OTP cancer with first-line chemotherapy commenced within 28 days of diagnosis
13. **Referral interval**: First consultation with a specialist within 7 days of GP referral
14. **Diagnostic interval**: Diagnosis or definitive treatment commenced within 21 days of first clinic appointment.

Performance of Quality Indicators

Figure 1: Institutional process Indicators

Most institutional process indicators (**QI 1-3**) were well performing (97.1-98.8%). Significant intra-operative events (23/323 (7.1%)) and serious post-operative adverse events (8/323 (2.5%)) were low at Monash Health.

Institutional process QI's:

Figure 2: Optimal Debulking

Comparison of optimal versus sub-optimal debulking in primary and interval debulking surgery

QI #6 and 7: Optimal debulking (Residual disease ≤ 1cm) rates after PDS and IDS were notably different (PDS (QI #6): 64.4% and IDS (QI #7): 89.1%).

*note: QI#6 only included patients with disease stage ≥ IIB whilst IDS included all stages

QI #5: Of the cytoreductive surgeries that took place at Monash Health clear documentation of residual disease in the operation report was 94/162 (58.0%).

Figure 4: Chemotherapy

Chemotherapy Adherence

QI #10: Of the 183 patients with known treatment agents, gold-standard treatment with a platinum-Taxane agent was used in 150/193 (77.7%) patients.
QI #11: Only 1 patient appropriately had treatment with bevacizumab added to platinum-taxane therapy (2.4%)

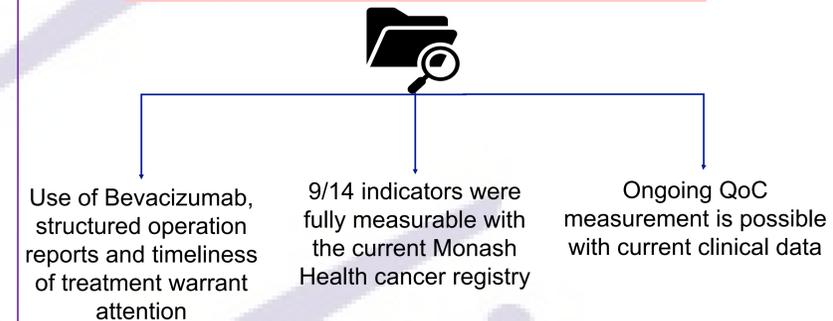**Figure 5: Time Interval indicators**

Time Interval Indicators

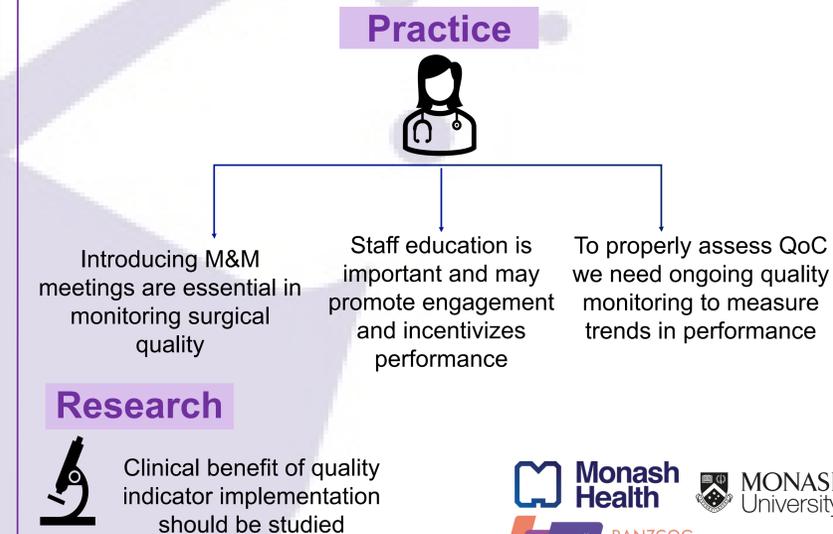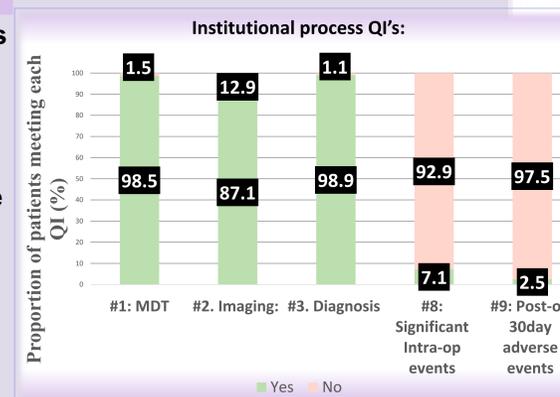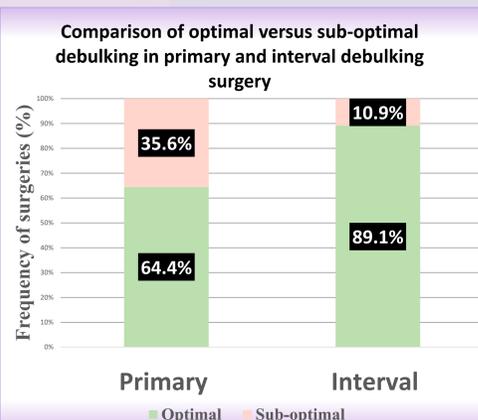**QI#12:** Chemotherapy was commenced within 28 days of diagnosis in 52.7% of patients.
QI #13*: 57/132 (43.1%) patients had their first clinic appointment within the recommended 7 days. **QI #14*:** Proportion of patients meeting the 21-day diagnostic interval target was 55%.

**The information required to measure this QI was not collected in the registry resulting in notable missing data

DISCUSSION & CONCLUSION:

- Use of Bevacizumab, structured operation reports and timeliness of treatment warrant attention
- 9/14 indicators were fully measurable with the current Monash Health cancer registry
- Ongoing QoC measurement is possible with current clinical data

FUTURE DIRECTIONS:

Practice

- Introducing M&M meetings are essential in monitoring surgical quality
- Staff education is important and may promote engagement and incentivizes performance
- To properly assess QoC we need ongoing quality monitoring to measure trends in performance

Research

- Clinical benefit of quality indicator implementation should be studied

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