PATTERNS OF OVARIAN CANCER CARE AND OVERALL SURVIVAL IN AUSTRALIA : A PROSPECTIVE STUDY FROM THE NATIONAL GYNAE-ONCOLOGY REGISTRY (NGOR)

Mahendra Naidoo[1], Orla McNally[2], Clare Scott[3], Michael Friedlander[4], Paul Cohen[5], Sharnel Perera[1], Alison Brand[6], Gary Richardson[1], Michael Buntin[7], Raj Mohan[8], Martin Oehler[9], Simon Hyde[10], Thomas Jobling[11], Rhonda Farrell[12], Susan Evans[13], Robert Rome[14], John Zalcberg[1]

[1]Monash University, Cancer Research Program - Monash University Public Health and Preventive Medicine, Melbourne, VIC, Australia, [2]The Royal Women's Hospital, Oncology and Dysplasia Service, Melbourne, VIC, Australia, [3]Sir Peter MacCallum Cancer Centre, Medical Oncology, Melbourne, VIC, Australia, [4]Prince of Wales and Royal Hospital for Women, Department of Medical Oncology, Sydney, NSW, Australia, [5]University of Western Australia, Perth, Australia, [6]Westmead Hospital, Gynaecology Oncology, Sydney, NSW, Australia, [7]Royal Hobart Hospital, Gynaecology Oncology, Hobart, TAS, Australia, [8]St John Of God Healthcare, Gynaecology Oncology, West Leederville, Australia, [9]Royal Adelaide Hospital, Gynaecological Oncology, Adelaide, SA, Australia, [10]Mercy Hospital for Women, Gynaecology Oncology, Melbourne, Australia, [11]Monash Health, Gynaecology Oncology, Melbourne, VIC, Australia, [12]Chris O'Brien Lifehouse, Gynae-Oncology, Camperdown, NSW, Australia, [13]Cancer Council Victoria, Victorian Cancer Registry Division, Melbourne, VIC, Australia, [14]Epworth Hospital, Gynaecology Oncology, East Melbourne, VIC, Australia

BACKGROUND

- **Ovarian cancer (OC) is the leading cause of mortality for gynaecological malignancies in Australia, with a 5-year survival for advanced disease (Stage III/IV) less than 30%. [1]**
- **There is a paucity of data on patterns of care for OC in Australia**
- **The National Gynae-Oncology Registry (NGOR) is Australia's first nationwide Clinical Quality Registry (CQR) established in 2017 designed to measure patterns of care for women with newly diagnosed OC.[2]**
- **The NGOR's OC module captures patient data pertaining to 'Best Practice' OC Clinical Quality Indicators (CQIs) agreed upon by experts covering diagnosis, imaging, surgery, targeted therapy and clinical trials.**
- **This permits a comparison of 'Real world' patterns of care against evidence-based optimal care**

OBJECTIVES

Using data on patients with newly diagnosed OC collected prospectively from the NGOR:

1) **Determine the patterns of care reflected by the CQIs within NGOR.**
2) **Determine the overall survival across Stages I-IV and the impact of CQIs on patient survival.**

METHODS

- **Data were sourced from the National Gynae-Oncology Registry (NGOR) Epithelial OC module encompassing Ovarian, Tubal, Peritoneal Cancers for patients aged ≥ 18 following a 2-week opt-out window.**
- **Lead ethics approval was obtained from Monash health, with additional ethics and governance approvals at each participating site prior to recruitment**
- **Descriptive statistics were generated and CQIs were analysed across the cohort**
- **Overall survival was estimated using cox proportional hazards regression.**
- **A stepwise factor selection was used to determine which CQIs influenced survival including adjusting for ECOG, Age, Stage and Co-morbidity where necessary.**

RESULTS

- **3, 133** patients were eligible.
- Mean follow up time was **2.43 years** (range 0.01-7.21 years)

Table 1. Characteristics of patients

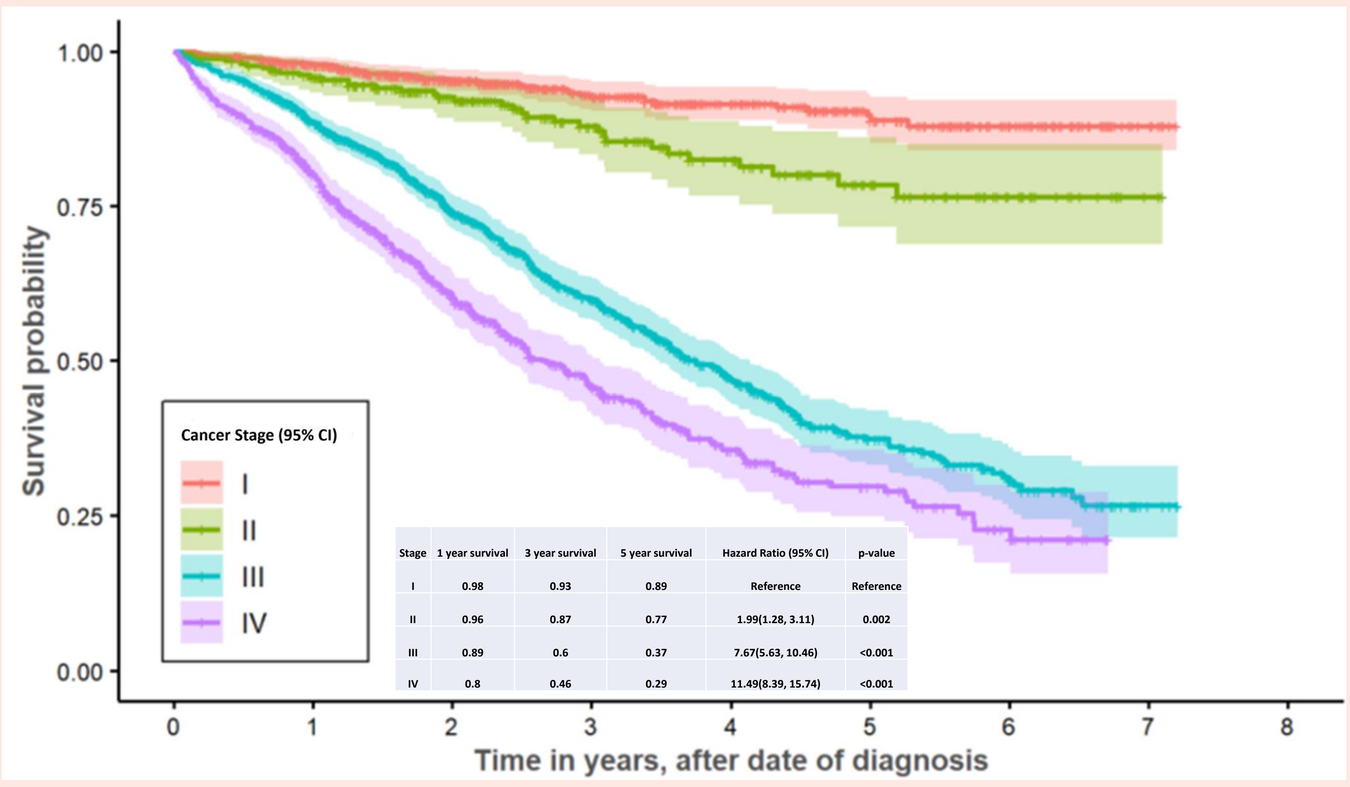
Characteristic	n (%)
Age in years at diagnosis (95% CI)	65 (55-74)
Cancer Stage	
I	658 (22)
II	264 (9)
III	1140 (39)
IV	725(25)
Missing data	346
Histological diagnosis	
Serous	2, 2284 (74)
Endometrioid	273 (8.8)
Clear Cell	211 (6.8)
Mucinous	192 (6.2)
Carcinosarcoma	69 (2.2)
Other	104 (3.3)
Tumour Grade	
Grade 1	347 (11)
Grade 2	133(4.3)
Grade 3	2515 (80)
Undifferentiated	9 (0.3)
Missing data	8
Treatment received	
Surgery and chemotherapy	2210 (72)
Surgery only	429 (14)
Chemotherapy only	329 (11)
Neither surgery or chemotherapy	99 (3.2)
Missing data	66
Hospital type	
Public	1453 (46)
Private	1675 (8.8)
Missing data	5
ECOG Performance Status	
0 - Fully active	1304 (53)
1 - Restricted	892 (36)
2 - Ambulatory	176 (7)
3 – Limited self-care	80 (3)
4 – Completely disabled	22 (0.4)
Missing data	669
Adjusted Charlson Comorbidity Score	
0-1: Low	897 (29)
2-3: Intermediate	1299 (42)
≥ 4: High	934 (30)
Missing data	3

Table 2: Clinical Quality Indicators achieved across Australia and correlation with survival

Clinical Quality Indicator	n (%)	Adjusted Risk for death (95% CI)	P-value
Discussed at a Multi-disciplinary Team Meeting	3044 (97)	-0.16 (-0.49,0.18)	0.4
Imaging to Stage prior to treatment (including CT Chest)	1540 (49)	0 (-0.12, 0.13)	0.9
Imaging to Stage prior to treatment (excluding CT Chest)	2392 (76)	0.1 (-0.06,0.25)	0.2
Histology or cytology confirmed prior to neoadjuvant chemotherapy	966 (92)	-0.01 (-0.4, 0.24)	0.6
Primary debulking surgery with no macroscopic residual disease	**256 (36)**	**-0.73 (-1.07, -0.38)**	**<0.001**
Primary debulking surgery with macroscopic residual disease < 1cm	130 (18)	0.15 (-0.18, 0.48)	0.4
Interval debulking surgery with no macroscopic residual disease	**265 (30)**	**-0.58 (-0.82, -0.34)**	**<0.001**
Interval debulking surgery with macroscopic residual disease < 1cm	217 (25)	0.3 (0.07, 0.52)	0.01
Intraoperative Events	189 (8)	0.09 (-0.19, 0.37)	0.5
Postoperative 30-day Adverse Events	**94 (4)**	**0.69 (0.36, 1.01)**	**<0.001**
Pathology Reports containing minimum required elements	2709 (98)	-0.22 (-0.67, 0.24)	0.3
Received first-Line chemotherapy with a Platinum and a Taxane Doublet	**2204 (86)**	**-0.57 (-0.75, -0.39)**	**<0.001**
Sub-optimally debulked or Stage IV patients receiving Platinum-Taxane doublet + Bevacizumab	245 (30)	0.003(-0.22, 0.23)	>0.9
Received first-line adjuvant chemotherapy within 28 days of surgery	406 (36)	-0.09(-0.37,0.18)	0.5
Received first-line neoadjuvant or palliative chemotherapy within 28 days of diagnosis	1040 (75)	0.07 (-0.12, 0.26)	0.5
Received germline or somatic BRCA1/2 testing before completion of chemotherapy	**1878 (79)**	**-0.42 (-0.58, -0.25)**	**<0.001**
Received PARP inhibitor for germline or somatic BRCA1/BRCA2 mutations within 8 weeks of completing chemotherapy	164 (60)	-0.28 (-0.8,0.25)	0.3
Enrolled in a clinical trial or translational research	522 (17)	0.12 (-0.05, 0.28)	0.2

- **The CQIs that significantly improved survival were patients who received germline/somatic BRCA testing, those receiving doublet chemotherapy and those who had no macroscopic residual disease after interval or primary debulking surgery**
- **Patients who had 30-day post operative events had significantly worse survival**

Figure 2. Overall survival across all stages of OC



CONCLUSION

- **This is Australia's first country-wide analysis demonstrating patterns of care and survival outcomes using a CQR.**
- **Long term survival in advanced OC (Stages III/IV) remains low but has improved over the last 10 years**
- **Measuring and comparing CQI's across hospitals has the potential to improve quality of care**
- **Further studies are required to explore how to improve on achieving CQIs that reflect best practice**

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