
Observational Study Report

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A multi-country, multi-centre, retrospective study evaluating the patient characteristics, disease burden, treatment patterns, and patient journey of advanced epithelial ovarian cancer patients: A study on Korean, Taiwanese, and Australian secondary databases

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LIST OF ABBREVIATIONS AND DEFINITION OF TERMS

Abbreviation or	Explanation
BMI	Body Mass Index
CCI	Charlson Comorbidity Index
CI	Confidence Interval
CIOMS	Council for International Organizations of Medical Sciences
CRF	Case Record Form
CRO	Clinical Research Organization
CR	Complete Response
EOC	Epithelial Ovarian Cancer
FIGO	International Federation of Gynaecology and Obstetrics
GCP	Good Clinical Practice
ICH	International Conference on Harmonization
ICF	Informed Consent Form
IDS	Interval Debulking Surgery
IEC	Independent Ethics Committee
IRB	Independent Review Board
MC	Marketing Company
OC	Ovarian Cancer
OS	Overall Survival
PDS	Primary Debulking Surgery
PD	Progressive Disease
PFI	Platinum Free Interval
PFS	Progress Free Survival
PR	Partial Response
TFST	Time to First Subsequent Treatment
TTP	Time To Progression
NHRI	National Health Insurance reimbursement

RESPONSIBLE PARTIES

Name	Professional Title	Role in Study	Affiliation	Email Address
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED].com
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

STUDY REPORT SUMMARY (ABSTRACT)

A multi-country, multi-centre, retrospective study evaluating the patient characteristics, disease burden, treatment patterns, and patient journey of advanced epithelial ovarian cancer patients: A study on Korean, Taiwanese, and Australian secondary databases

Background/Rationale:

Epithelial ovarian cancer (EOC) is the most common subtypes of ovarian cancer. Patients with epithelial ovarian cancer often present at an advanced stage of disease with a poor prognosis, resulting in high morbidity and mortality. Considering the high disease burden of epithelial ovarian cancer, it is important to have well-organized databases on the clinical characteristics, treatment patterns, and outcomes of these patients, to help identify the unmet needs and gaps and further optimize the survival outcomes. However, there is a paucity of such databases or published literature with the exception of the UK, France, Germany, Italy, Spain and USA. Therefore, this study aims to analyse the secondary longitudinal data from South Korea, Australia and Taiwan to leverage existing databases in the real-world setting to review the current standard of care in advanced epithelial ovarian cancer cases. By identifying similarities and differences in patient treatment patterns and survival outcomes associated with the current standard of care, this study seeks to provide the required information to assess the unmet treatment needs and to support reimbursement activities for future novel therapies.

Objectives and Hypotheses:

The objectives of this study were as follows:

1. To describe the demographics and clinical characteristics of patients newly diagnosed with advanced-stage epithelial ovarian cancer;
2. To characterize the detailed treatment patterns received after the index date;
3. To evaluate the clinical outcomes after the first line of systemic treatment.

Methods:

This was a multi-country, multi-centre, retrospective study on analysis of secondary databases of patients diagnosed with advanced-stage epithelial ovarian cancer in South Korea (Sungkyunkwan University, Samsung Medical Centre, Seoul), Australia (Australian Ovarian Cancer Society Registry) and Taiwan (National Taiwan University, Chang-Gung Medical Foundation Linkou Branch and Mackay Memorial Hospital).

Female subjects above the age of 18, who had a confirmed diagnosis of advanced-stage (FIGO III/IV) epithelial ovarian cancer between the period 2014–2018 and at had at least 12 months of data available (though it was not mandatory that the data be ovarian cancer related), were included in the study. In Taiwan dataset, only high-grade serous type (HGS) epithelial ovarian cancer (EOC) patients diagnosed in between 2014-2017 were recruited to the study. Treatment patterns for subjects, along with their demographic and clinical characteristics were descriptively analysed. Survival outcomes such as Real World Progression Free Survival (rwPFS) and overall survival (OS) were investigated and compared among patients of different frontline treatment patterns. All the descriptive statistical analyses were performed on the regional data separately.

Results:

The database used for analyses contained the medical records of 987 eligible patients, 513 from South Korea, 223 from Australia and 251 from Taiwan. More than 82% of patients in Korea and Australia, and all our patients from Taiwan were diagnosed as high-grade serous (HGS) EOC. In this study, 394 (76.8%), 164 (73.5%) and 22 (8.8%) patients received germline BRCA mutation testing, while 174 (33.9%), 13 (5.8%) and 21 (8.4%) patients underwent tissue BRCA mutation testing in South Korea, Australia and Taiwan respectively. The positive rate of germline BRCA mutation ranged from 11.0% to 36.4% and the positive rate of tissue BRCA mutation ranged from 9.5% to 34.5% among tested patients from the three countries included in the study. As per exclusion criteria, prior PARPi use was excluded in the study, therefore some patients who were positive for BRCAm were excluded in the Australia data. However, these high incidence rates indicated a potential strong association between BRCA positive mutation and advanced EOC. In addition, BRCA mutation was found to significantly influence

the patients' PFS and OS in Korea, which has also been observed in other studies. Besides, BRCA mutation status has been regarded as a prognostic and predictive biomarker of currently available PARPi. Mutation testing on both germline and tissue BRCA is recommended by widely used guidelines, such as NCCN, ESGO and SGO, etc. Over 98% of patients had received surgery plus platinum-based chemotherapy in each of the three countries. Primary debulking surgery (PDS) was preferred in Korea and Taiwan, while interval debulking surgery (IDS) was preferred in Australia. Most of patients reached an optimal outcome after surgery. Patients with IDS were found to achieve optimal levels more frequently than those with PDS. Chemotherapy regimens and schedules used were largely similar in Korea and Taiwan, but with more variation between them and Australia as well. The clinical complete or partial complete response rate after the chemotherapy ranged from 72.5% to 90.6%. In this study, 16.4%, 28.3% and 16.7% of patients had received bevacizumab-based targeted therapy; 14.6%, 26.5% and 6.4% of patients had received bevacizumab-based maintenance treatment in Korea, Australia and Taiwan respectively. In spite of the different strategies used in first line treatments, 56.1% to 63.5% of patients still received second line treatments during the follow up time before final data cut off. 67.7% to 77.6% of patients even had relapse progression about 16 to 19 months after diagnosis. The overall survival (OS) rate of patients in the three regions was similarly high, at over 76% in the five years during the study period. However, no significant difference was found on PFS or OS between patients who received PDS and IDS or those who were treated with and without bevacizumab-based maintenance. Patients who had R0 as surgery outcome would also have higher PFS probabilities, therefore to achieve optimal surgery outcome is essential for better survival of EOC patients in the real-world setting.

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MILESTONES

Milestone	Date
Final Protocol	April 2020
FSI	April 2020
LSI	July 2020
Database lock	August 2020
Development of analytic dataset	August 2020
Statistical analysis	May 2021
Final report	August 2021
