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SPECIAL ARTICLE

Pan-Asia adapted ESMO Clinical Practice Guideline for the management of patients with newly diagnosed and relapsed epithelial ovarian cancer

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The European Society for Medical Oncology (ESMO) Clinical Practice Guideline for the diagnosis, treatment and follow-up of patients with newly diagnosed and relapsed epithelial ovarian cancer (EOC), published in 2023, was adapted in July 2024, according to established standard methodology, to produce the Pan-Asian adapted ESMO consensus guideline for the management of Asian patients with EOC. The adapted guideline presented in this manuscript represents the consensus opinions reached by a panel of Asian experts in the treatment of patients with EOC representing the oncological societies of China, Indonesia, India, Japan, Korea, Malaysia, the Philippines, Singapore, Taiwan and Thailand, coordinated by ESMO and the Indian Society of Medical and Pediatric Oncology. Voting was based on scientific evidence and was independent of current treatment practices, drug access restrictions and reimbursement decisions in the represented countries. Drug access and reimbursement across Asia are discussed separately in the manuscript. The Pan-Asian consensus aims to guide the optimisation and harmonisation of management of patients with EOC in Asia, drawing on the evidence provided by both Western and Asian trials. Attention is drawn to the disparity in the drug approvals and reimbursement strategies between countries.

Key words: epithelial ovarian cancer, ESMO, guideline, Pan-Asian, treatment

INTRODUCTION

Epithelial ovarian cancer (EOC) includes a heterogeneous spectrum of disease entities. In 2022, >178 000 new cases of ovarian cancer and >109 000 deaths related to ovarian cancer were reported across Asia.[1] The updated European Society for Medical Oncology (ESMO) Clinical Practice Guideline (CPG) for the diagnosis, treatment and follow-up

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of patients with newly diagnosed and relapsed epithelial ovarian cancer was published in 2023.[2] It was subsequently decided that the ESMO guidance should be adapted to provide an updated Pan-Asian guideline for the management of EOC in patients of Asian ethnicity. This manuscript summarises the Pan-Asian adapted guidance developed and agreed upon at a virtual consensus meeting that took place on 6 July 2024, hosted by the Indian Society of Medical and Pediatric Oncology (ISMPO).

METHODOLOGY

This Pan-Asian adaptation of the current ESMO CPG[2] was prepared in accordance with the principles of ESMO standard operating procedures (https://www.esmo.org/Guidelines/ESMO-Guidelines-Methodology) and was an ISMPO—ESMO initiative endorsed by the Chinese Society of Clinical Oncology (CSCO), the Indonesian Society of Hematology and Medical Oncology (ISHMO), the Japanese Society of Medical Oncology (JSMO), the Korean Society of Medical Oncology (KSMO), the Malaysian Oncological Society (MOS), the Philippine Society of Medical Oncology (PSMO), the Singapore Society of Oncology (SSO), the Taiwan Oncology Society (TOS) and the Thai Society of Clinical Oncology (TSCO). One expert from Thailand (ST) was a member of the Thai Gynecologic Cancer Society, which is endorsed by the TSCO.

The methods used to review and modify the recommendations from the latest ESMO CPG on the diagnosis, treatment and follow-up of EOC[2] are summarised in Supplementary Material Section 1, available at https://doi.org/10.1016/j.esmoop.2025.105125. All of the Asian experts ($n = 20$) approved the revised recommendations. Modifications to the initial ESMO recommendations are highlighted in bold text. A level of evidence and grade of recommendation accompanies each recommendation[3] and, where applicable, ESMO-Magnitude of Clinical Benefit Scale (ESMO-MCBS)[4] and ESMO Scale for Clinical Actionability of Molecular Targets (ESCAT)[5] scores are provided (Supplementary Table S1-S3, available at https://doi.org/10.1016/j.esmoop.2025.105125, respectively). All authors contributed to, reviewed and approved the final manuscript.

RESULTS

Scientific adaptations of the ESMO recommendations

In the initial pre-meeting survey, the 20 voting Asian experts reported on the acceptability of the 40 recommendations for the diagnosis, treatment and follow-up of patients with newly diagnosed and relapsed EOC from the most recent ESMO CPG.[2] The results of the pre-meeting survey are summarised in Supplementary Table S4, available at https://doi.org/10.1016/j.esmoop.2025.105125. A lack of consensus was identified for 22 recommendations. Of these, 14 were associated with comments of significant scientific relevance and were selected for discussion during the consensus meeting. The remaining eight recommendations were evaluated but the comments were deemed not sufficiently relevant for the scientific discussion and/or more appropriate for discussion in the applicability section. One new recommendation (recommendation 5o) was added during development of this guideline and agreed upon by the Pan-Asian panel of experts. The updated recommendations are listed in Table 1 and a flowchart of the decision process is shown in Supplementary Figure S1, available at https://doi.org/10.1016/j.esmoop.2025.105125.

1. Diagnosis, pathology and molecular biology — recommendations 1A-1D. The Pan-Asian panel of experts agreed with and completely accepted (100% consensus) the original ESMO recommendation 1A (Table 1) without change.

For recommendation 1B, the Asian experts emphasised that while an expert gynaecological pathologist is preferred (particularly in the case of difficult or equivocal diagnoses), a general oncological pathologist is acceptable in regions where the availability of specialists is limited. The wording of the original ESMO recommendation 1B was modified as per the bold text below and in Table 1 to read as follows:

> *1B. Pathological diagnosis should be made according to the 2020 World Health Organization classification by an* ***oncological*** *pathologist,* ***preferably an expert gynaecological pathologist*** *[IV, A; consensus = 100%].*

In relation to recommendation 1C, it was highlighted that *BRCA1/2* mutations (*BRCA1/2*-muts) are common in Asian patients with EOC, particularly in serous subtypes and in young patients[6-11]; therefore, *BRCA1/2*-mut testing is an important consideration in Asian populations. The panel noted that testing may only be required in women known to be at risk of genetic aberrations and that panel tests may be considered over specific *BRCA1/2*-mut testing outside of the non-mucinous setting. The expert panel agreed that *BRCA1/2*-mut testing should be routinely recommended for all high-grade, non-mucinous EOC. The wording of the original ESMO recommendation 1C was modified as per the bold text below and in Table 1 to read as follows:

> *1C. All patients with high-grade,* ***non-mucinous*** *ovarian cancer should be tested for germline and/or somatic* BRCA1/2*-mut at diagnosis [I, A; consensus = 100%].*

The Pan-Asian panel of experts agreed with and completely accepted (100% consensus) the original ESMO recommendation 1D (Table 1) without change but noted that homologous recombination deficiency (HRD) testing is most beneficial in the *BRCA1/2*-wild type (wt) setting. In Singapore, HRD testing is reserved for patients with high-grade endometrioid, serous or undifferentiated EOC (non-clear-cell and mucinous). Overall, however, the panel agreed that HRD testing should be carried out in both serous and non-serous EOC. While simultaneous germline *BRCA1/2*-mut and HRD testing are recommended, country-specific resource limitations may necessitate sequential testing; in this case, germline *BRCA1/2*-mut testing should

Table 1. Summary of Asian consensus recommendations for the treatment of patients with EOC

Recommendation	Acceptability consensus
1. Diagnosis, pathology and molecular biology	
1A. If EOC is suspected, diagnostic work-up should include serum CA-125 measurement, pelvic US by an expert examiner and CT scan of the thorax, abdomen and pelvis [III, A]	100%
1B. Pathological diagnosis should be made according to the 2020 WHO classification by an **oncological** pathologist, **preferably an expert gynaecological pathologist** [IV, A]	100%
1C. All patients with high-grade, **non-mucinous** ovarian cancer should be tested for germline and/or somatic *BRCA1/2*-mut at diagnosis [I, A]	100%
1D. Testing for HRD is recommended in advanced high-grade cancers [I, A]	100%
2. Staging and risk assessment	
2A. The revised 2014 FIGO staging system for EOC should be used [I, A]	100%
3. Management of early EOC (FIGO stage I-II)	
3A. Surgical staging is recommended in presumed early-stage ovarian cancer for classification and recommendation of optimal systemic therapy [III, A]	100%
3B. Adjuvant ChT in early-stage ovarian cancer is generally recommended for FIGO stage I-IIB (see exceptions below) [II, A], either paclitaxel—carboplatin [I, B] or carboplatin (six cycles) alone [I, A]	100%
3C. For patients receiving paclitaxel—carboplatin, a minimum of three cycles are recommended, except for patients with HGSOC, high-grade EC or stage IC-II **any** histotype, for **whom** six cycles are **recommended** [II, B]	100%
3D. The benefit of adjuvant ChT is uncertain and can be considered as optional [III, C] for: • LGSOC stage IB-IC • CCC stage IA-IC1 • Low-grade EC stage IB-IC • Expansile MC stage IC • Infiltrative MC stage IA	100%
3E. Adjuvant ChT is not recommended in completely staged patients with LGSOC stage IA, low-grade EC stage IA or expansile MC stage IA-IB [II, E]	100%
4. Management of advanced EOC (FIGO stage III-IV)	
4A. Patients with advanced EOC should be evaluated for PCS by a specialised team, with the aim of achieving complete cytoreduction (absence of all visible residual disease) [III, A]	100%
4B. When complete cytoreductive surgery is feasible, PCS is recommended [III, A]; otherwise, obtaining adequate biopsy tissue for histology and molecular testing is recommended [III, A]	100%
4C. When complete cytoreductive surgery is not feasible, NACT for three cycles followed by ICS and three cycles of paclitaxel—carboplatin are recommended [I, A]	100%
4D. Bevacizumab in the neoadjuvant setting, before ICS, can be considered [II, B]	100%
4E. When ICS is not possible, and in the absence of overt disease progression, three additional cycles of paclitaxel—carboplatin alone [I, A] or with bevacizumab [II, B] are recommended	100%
4F. **First-line** systemic therapy decisions should be **guided** by *BRCA1/2*-mut (germline and/or somatic) and HRD status testing [I, A]	100%
4G. Paclitaxel (175 mg/m^2)—carboplatin (AUC 5-6) every 3 weeks for six cycles is the standard first-line ChT in advanced ovarian cancer [I, A]	100%
4H. The schedule of weekly ChT with paclitaxel (60 mg/m^2)—carboplatin (AUC 2) can be considered as an alternative in frail patients [I, B]	100%
4I. Bevacizumab improves PFS in patients with stage III-IV ovarian cancer and should be considered in addition to paclitaxel—carboplatin [I, A; ESMO-MCBS v1.1 score: 1]	100%
4J. Given the controversy about i.p. ChT [I, E] and HIPEC [II, D], they are not considered a standard of care in first-line treatment	100%
4K. Maintenance treatment with PARPis, with or without bevacizumab, is recommended for patients with *BRCA1/2*-mutated or *BRCA1/2*-wt/HRD-positive tumours with no evidence of disease at the end of ChT or a complete or partial response to platinum—paclitaxel first-line ChT [I, A] • For *BRCA1/2*-mutated: olaparib for 2 years [ESMO-MCBS v1.1 score: 4; ESCAT score: I-A], niraparib for 3 years [ESMO-MCBS v1.1 score: 3; ESCAT score: I-A], olaparib—bevacizumab for 2 years **(olaparib) and 15 months (bevacizumab)** [ESMO-MCBS v1.1 score: 4; ESCAT score: I-A] or rucaparib for 2 years [ESMO-MCBS v1.1 score: 3; **ESCAT score: I-A**] • For *BRCA1/2*-wt/HRD-positive: niraparib for 3 years [ESMO-MCBS v1.1 score: 3; ESCAT score: I-A], olaparib—bevacizumab for 2 years **(olaparib) and 15 months (bevacizumab)** [ESMO-MCBS v1.1 score: 2; ESCAT score: I-A] or rucaparib for 2 years [ESMO-MCBS v1.1 score: 3; **ESCAT score: I-A**]	100%
4L. Maintenance treatment with either bevacizumab [I, A] or niraparib for 3 years [I, B; ESMO-MCBS v1.1 score: 3] or rucaparib for 2 years [I, B; ESMO-MCBS v1.1 score: 3] can be **considered** for HRD-negative tumours, with the latter following complete or partial response to platinum—paclitaxel first-line ChT. The choice of treatment should be based on disease and clinical characteristics of the patient	100%
4M. Maintenance with anti-estrogen therapy after first-line platinum-based ChT can be considered in **ER-positive** LGSOC [IV, B]	100%
5. Management of recurrent EOC	
5A. The following should be assessed when selecting treatment for patients with recurrent disease [I-III, A]: • Histotype • *BRCA1/2*-mut status • Number of prior lines of treatment • Exposure and response to prior treatment • TFIp • Possibility of achieving a complete secondary surgical cytoreduction • Residual ChT toxicity • The patient's general condition and preferences	100%
5B. Patients with first relapse of ovarian cancer after >6 months of last platinum administration should be evaluated by a gynaecological oncology centre experienced in surgery for ovarian cancer to identify potential candidates for surgical cytoreduction [I, A]	100%

Continued

Table 1. Continued

Recommendation	Acceptability consensus
5C. Patients who have previously responded to platinum without early symptomatic relapse should be treated with either a platinum-based doublet (PLD, gemcitabine or paclitaxel) with bevacizumab [I, A; carboplatin—gemcitabine—bevacizumab ESMO-MCBS v1.1 score: 3] or a platinum-based doublet followed by maintenance with PARPi therapy if a response is achieved and the patient has not been previously exposed to PARPis [I, A; olaparib for *BRCA1/2*-mutated: ESMO-MCBS v1.1 score: 2; niraparib regardless of *BRCA1/2*-mut status: ESMO-MCBS v1.1 score: 3; rucaparib regardless of *BRCA1/2*-mut status: ESMO-MCBS v1.1 score: 3]	100%
5D. For patients requiring rapid response, the combination of a platinum-based doublet (PLD, gemcitabine or paclitaxel) with bevacizumab is preferred [V, A; carboplatin—gemcitabine—bevacizumab ESMO-MCBS v1.1 score: 3]	100%
5E. Bevacizumab should be continued until disease progression (symptomatic) or the next line of treatment is started, as continuation of bevacizumab beyond progression has not been evaluated in the recurrent setting [I, A]	100%
5F. PARPis should be continued until disease progression or the next line of treatment is started [I, A], as the benefit of continuing treatment beyond progression has not been demonstrated conclusively to date [III, B]	100%
5G. Platinum rechallenge following treatment with a non-platinum regimen (monotherapy or combination) could be considered if the tumour did not progress during prior platinum therapy [III, B]	100%
5H. Patients with relapsed EOC for whom platinum is not an option should be defined by [II-IV, A]: • Proven resistance (progression during platinum) • Expected resistance (early symptomatic progression post-platinum, response to rechallenge unlikely) • Platinum intolerance • Patient **preference** • Quality of life issues	100%
5I. For patients not candidates to receive platinum, integrating palliative care early in the treatment pathway is strongly recommended [I, A]	100%
5J. Single-agent non-platinum options that can be recommended include weekly paclitaxel, PLD, topotecan and gemcitabine [I, B]	100%
5K. In patients with platinum intolerance who have relapsed >6 months from previous platinum, trabectedin—PLD may be **considered** [II, C; ESMO-MCBS v1.1 score: 2 for patients with platinum-sensitive disease; EMA approved, not FDA approved]	100%
5L. Bevacizumab should be recommended in combination with weekly paclitaxel, PLD or topotecan in patients without contraindications to bevacizumab and not previously exposed to bevacizumab [I, A; ESMO-MCBS v1.1 score: 4]	100%
5M. Hormonal therapy is recommended for relapsed LGSOC [II, A]	100%
5N. For patients with recurrent LGSOC, treatment with the MEK inhibitor trametinib should be considered after prior platinum-based ChT and hormone therapy (not EMA or FDA approved) [I, A]	100%
5O. Mirvetuximab soravtansine is recommended as a therapeutic option for patients with FRα expression (≥75% 2+ by IHC) and platinum-resistant relapse after 1-3 prior systemic regimens [I, A; ESMO-MCBS v1.1 score 3]	100%
6. Follow-up, long-term implications and survivorship	
6A. Surveillance of ovarian cancer patients can include CA-125 determination, physical examination and CT scan evaluation [IV, B]	100%
6B. *BRCA1/2*-mut carriers **should** be considered for follow-up beyond 5 years [III, B]	100%
6C. Long-term *BRCA1/2*-mut survivors should be referred to high-risk breast cancer clinics for follow-up [I, A]	100%

Modifications to the initial ESMO recommendations are highlighted in bold text.

AUC, area under the curve; CA-125, cancer antigen 125; CCC, clear-cell carcinoma; ChT, chemotherapy; CT, computed tomography; EC, endometrioid carcinoma; EMA, European Medicines Agency; EOC, epithelial ovarian cancer; ER, estrogen receptor; ESCAT, European Society for Medical Oncology Scale for Clinical Actionability of molecular Targets; ESMO-MCBS, European Society for Medical Oncology-Magnitude of Clinical Benefit Scale; FDA, Food and Drug Administration; FIGO, International Federation of Gynecology and Obstetrics; FRα, folate receptor α; HGSOC, high-grade serous ovarian carcinoma; HIPEC, hyperthermic intraperitoneal perioperative chemotherapy; HRD, homologous recombination deficiency; ICS, interval cytoreductive surgery; IHC, immunohistochemistry; i.p., intraperitoneal; LGSOC, low-grade serous ovarian carcinoma; MC, mucinous carcinoma; MEK, mitogen-activated protein kinase kinase; mut, mutation; NACT, neoadjuvant chemotherapy; PARPi, poly (ADP-ribose) polymerase inhibitor; PCS, primary cytoreductive surgery; PFS, progression-free survival; PLD, pegylated liposomal doxorubicin; TFIp, treatment-free interval from last platinum; US, ultrasound; WHO, World Health Organization; wt, wild type.

be prioritised, followed by HRD testing in patients with *BRCA1/2*-wt disease. The experts also discussed the timing of *BRCA1/2*-mut and HRD testing, emphasising that there is no urgency to carry out testing at initial biopsy. In fact, 'at diagnosis' refers to a period of time encompassing initial diagnosis and first-line treatment (i.e. a few weeks).

2. Staging and risk assessment — recommendation 2A. The Pan-Asian panel of experts agreed with and completely accepted (100% consensus) the original ESMO recommendation 2A (Table 1) without change.

3. Management of early EOC (FIGO stage I-II) — recommendations 3A-3E. The panel agreed with and completely accepted (100% consensus) the original ESMO recommendations 3A, 3B, 3D and 3E (Table 1) without change.

Regarding recommendation 3C, the expert panel discussed the recommended number of adjuvant paclitaxel—carboplatin cycles for specific patient subgroups. It was suggested that when chemotherapy (ChT) is necessary, six cycles should be completed unless there are unacceptable toxicities. This is based on results from the GOG 157 trial, which demonstrated no difference in 5-year overall survival (OS) rate with three versus six cycles of adjuvant paclitaxel—carboplatin [81% versus 83%, respectively; hazard ratio (HR) 1.02, 95% confidence interval (CI) 0.662-1.57] but reported a 24% lower recurrence rate following six cycles.[12]

The Asian experts also highlighted the need to identify patients who can be spared from ChT; for example, grade 1 mucinous or endometrioid carcinoma (EC) can be successfully treated with surgery alone. The original ESMO CPG provides guidance for clinical situations where ChT can be omitted.[2] A retrospective Japanese study evaluating adjuvant ChT in clear-cell EOC demonstrated that adjuvant ChT

is not required in patients with stage IA disease but should be considered for patients with stage ≥IB disease.[13]

Following these discussions, the wording of the original ESMO recommendation 3C was modified slightly as per the bold text below and in Table 1 to read as follows:

3C. For patients receiving paclitaxel—carboplatin, a minimum of three cycles are recommended, except for patients with high-grade serous carcinoma, high-grade EC or stage IC-II ***any*** *histotype, for* ***whom*** *six cycles are* ***recommended*** *[II, B; consensus = 100%].*

A proposed algorithm for the treatment of early EOC is shown in Figure 1.

4. Management of advanced EOC (FIGO stage III-IV) — recommendations 4A-M. The Pan-Asian panel of experts agreed with and completely accepted (100% consensus) the original ESMO recommendations 4A-E and 4H-J (Table 1) without change.

For recommendation 4F, the panel agreed that 'systemic therapy' should refer to the first-line setting, as the results of *BRCA1/2*-mut and HRD tests do not guide therapy following recurrence. The clinical validity and utility of *BRCA1/2*-mut and HRD testing have been reported previously.[14]

The wording of the original ESMO recommendation 4F was modified as per the bold text below and in Table 1 to read as follows:

4F. ***First-line*** *systemic therapy decisions should be* ***guided*** *by* BRCA1/2*-mut (germline and/or somatic) and HRD status testing [I, A; consensus = 100%].*

In relation to recommendation 4G, it was proposed that pegylated liposomal doxorubicin (PLD)—carboplatin should be added to the recommendations for first-line treatment of advanced EOC, based on the findings of the MITO-2 study, which reported similar progression-free survival (PFS) and OS with PLD—carboplatin versus paclitaxel—carboplatin.[15] In China, PLD—carboplatin is commonly used in patients who cannot tolerate paclitaxel. MITO-2, however, was not a non-inferiority or equivalence trial and PLD—carboplatin did not demonstrate superiority over paclitaxel—carboplatin (primary endpoint). For this reason, paclitaxel—carboplatin remains the standard first-line ChT regimen. Following this discussion, the expert panel agreed with and completely accepted (100% consensus) the original ESMO recommendation 4G (Table 1) without change.

For recommendation 4K, there was discussion regarding maintenance treatment for patients with advanced *BRCA1/2*-mutated or HRD-positive disease. The expert panel acknowledged that the availability of the recommended maintenance treatments varies between regions. Fuzuloparib is a poly (ADP-ribose) polymerase inhibitor (PARPi) that is approved in China and is widely used as maintenance treatment in this patient population.[16,17] Data are currently awaited on the efficacy of a fuzuloparib—apatinib

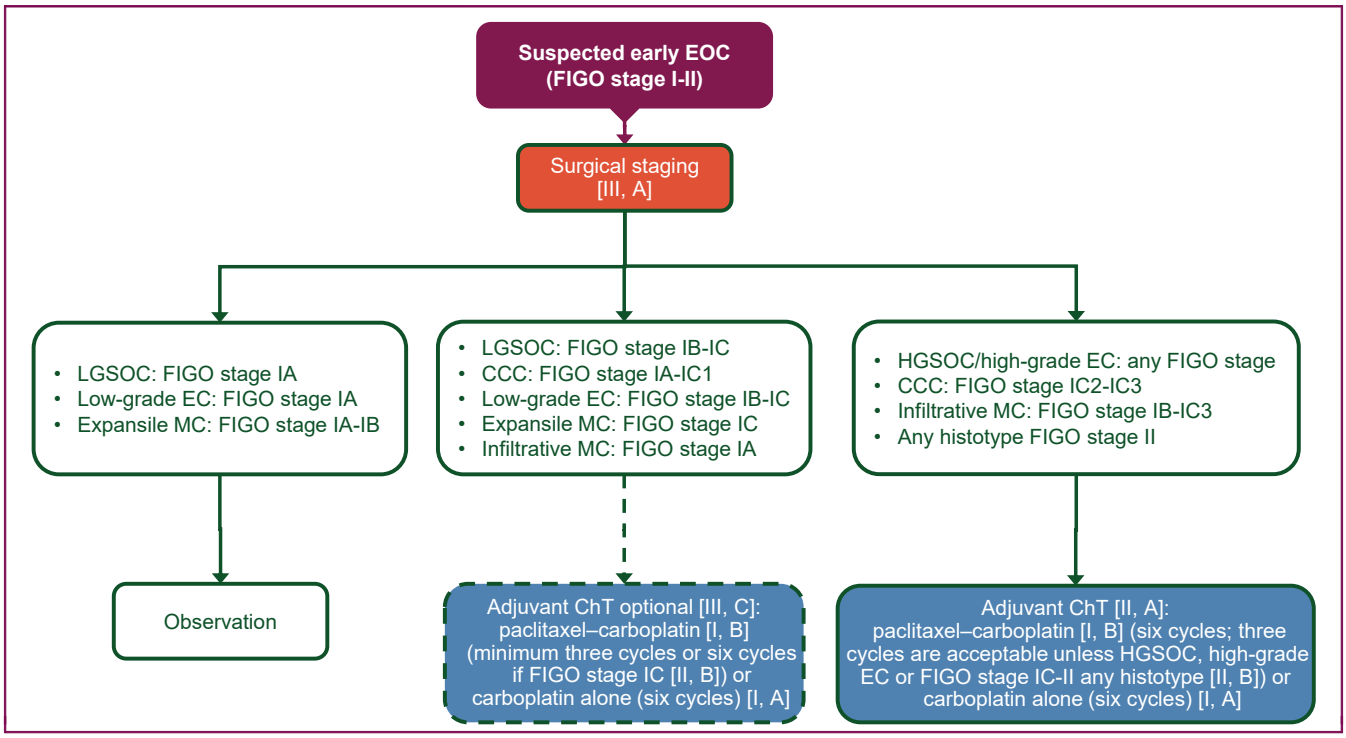

Figure 1. Management of early EOC (FIGO stage I-II). See Supplementary Table S1 of the ESMO CPG for EOC[2] for a summary of the benefit of adjuvant systemic therapy for early EOC (FIGO I-II stage).
Purple: algorithm title; orange: surgery; blue: systemic anticancer therapy or their combination; white: other aspects of management and non-treatment aspects; dashed lines: optional therapy.
CCC, clear-cell carcinoma; ChT, chemotherapy; CPG, Clinical Practice Guideline; EC, endometrioid carcinoma; EOC, epithelial ovarian cancer; ESMO, European Society for Medical Oncology; FIGO, International Federation of Gynecology and Obstetrics; HGSOC, high-grade serous ovarian carcinoma; LGSOC, low-grade serous ovarian carcinoma; MC, mucinous carcinoma.

combination. The lack of direct evidence to show that olaparib—bevacizumab improves outcomes versus olaparib alone was highlighted; the final analysis of PAOLA-1 reported a substantial PFS benefit with olaparib—bevacizumab compared with bevacizumab alone for these patients, but did not include an olaparib monotherapy arm.[18] The expert panel agreed that olaparib—bevacizumab remains a standard of care in patients with HRD-positive tumours. Niraparib[19] and rucaparib[20] have both demonstrated PFS benefit in patients with HRD-positive and HRD-negative disease. A recent updated analysis, however, reported no OS benefit with niraparib in either HRD-positive or HRD-negative subgroups at a follow-up of 73.9 months, although the PFS benefit persisted.[21] Following these discussions, the panel agreed with and accepted the original ESMO recommendation 4K, but added an ESCAT score of I-A for rucaparib and clarified the treatment time for bevacizumab as per the bold text below and in Table 1 to read as follows:

4K. Maintenance treatment with PARPis, with or without bevacizumab, is recommended for patients with BRCA1/2-*mutated or* BRCA1/2-*wt/HRD-positive tumours with no evidence of disease at the end of ChT or a complete or partial response to platinum—paclitaxel first-line ChT [I, A; consensus = 100%].*

- For *BRCA1/2*-mutated: olaparib for 2 years [ESMO-MCBS v1.1 score: 4; ESCAT score: I-A], niraparib for 3 years [ESMO-MCBS v1.1 score: 3; ESCAT score: I-A], olaparib—bevacizumab for 2 years **(olaparib) and 15 months (bevacizumab)** [ESMO-MCBS v1.1 score: 4; ESCAT score: I-A] or rucaparib for 2 years [ESMO-MCBS v1.1 score: 3; **ESCAT score: I-A**].
- For *BRCA1/2*-wt/HRD-positive: niraparib for 3 years [ESMO-MCBS v1.1 score: 3; ESCAT score: I-A], olaparib—bevacizumab for 2 years **(olaparib) and 15 months (bevacizumab)** [ESMO-MCBS v1.1 score: 2; ESCAT score: I-A] or rucaparib for 2 years [ESMO-MCBS v1.1 score: 3; **ESCAT score: I-A**].

Maintenance treatment for patients with HRD-negative EOC was discussed in relation to recommendation 4L. While PARPis are associated with substantial PFS benefits in patients with *BRCA1/2*-mutated or HRD-positive disease, the benefit of these drugs in HRD-negative tumours has been marginal in randomised controlled trials (RCTs).[18-20] Furthermore, a meta-analysis of five RCTs concluded that PARPis do not substantially improve PFS in patients with HRD-negative disease.[22] The Asian expert panel, therefore, agreed that the use of PARPis in this patient population should be 'considered' rather than 'recommended'. The wording of the original ESMO recommendation 4L was modified as per the bold text below and in Table 1 to read as follows:

4L. Maintenance treatment with bevacizumab [I, A], niraparib for 3 years [I, B; ESMO-MCBS v1.1 score: 3] or rucaparib for 2 years [I, B; ESMO-MCBS v1.1 score: 3] can be ***considered*** *for HRD-negative tumours, with the PARPi therapy following complete or partial response to platinum—paclitaxel first-line ChT. The choice of treatment should be based on disease and clinical characteristics of the patient [consensus = 100%].*

For recommendation 4M, the Asian experts discussed the use of anti-estrogen therapy after first-line platinum-based ChT in patients with estrogen receptor (ER)-positive and ER-negative low-grade serous ovarian carcinoma (LGSOC). LGSOC is a rare entity; therefore, the ESMO recommendation is based on relatively low patient numbers. The main evidence in this setting is from a retrospective trial ($n = 203$), in which 96% of patients with available data had ER-positive tumours.[23] A randomised phase III trial evaluating letrozole versus ChT for maintenance treatment in LGSOC is ongoing (NRG-GY019; NCT04095364), but there are currently no precise data showing either a benefit or lack of benefit with anti-estrogen therapy in ER-negative disease. Following discussions, the panel agreed that the recommendation should align with the key study and, therefore, should restrict the use of anti-estrogen therapy to patients with ER-positive disease. The wording of the original ESMO recommendation 4M was modified as per the bold text below and in Table 1 to read as follows:

4M. Maintenance with anti-estrogen therapy after first-line platinum-based ChT can be considered ***in ER-positive*** *LGSOC [IV, B; consensus = 100%].*

A proposed algorithm for the treatment of advanced EOC is shown in Figure 2.

5. Management of recurrent EOC — recommendations 5A-5O. The Pan-Asian panel of experts agreed with and completely accepted (100% consensus) the original ESMO recommendations 5B-G, 5I, 5J, 5L and 5M (Table 1) without change.

For recommendation 5A, the expert panel discussed whether HRD testing should be recommended in addition to *BRCA1/2*-mut testing when selecting treatment for patients with recurrent disease. The addition of HRD testing is not recommended. It was acknowledged that both *BRCA1/2*-mut testing and HRD testing in patients with platinum-sensitive recurrent disease can predict the likely magnitude of benefit of PARPis.[14] *BRCA1/2*-mut testing is not required if it has already been carried out in the first-line setting and is not required in patients who are already known to be platinum resistant. Following these clarifications, the expert panel agreed with and completely accepted (100% consensus) the original ESMO recommendation 5A (Table 1) without change.

The factors that define patients who are unsuitable for platinum-based ChT were discussed in relation to recommendation 5H. 'Patient choice' was debated as the Asian experts agreed that all patients who are fit, eligible for platinum-based ChT and have no contraindications should be encouraged to proceed with this treatment. The patient's preferences, however, must be taken into consideration. The wording of the

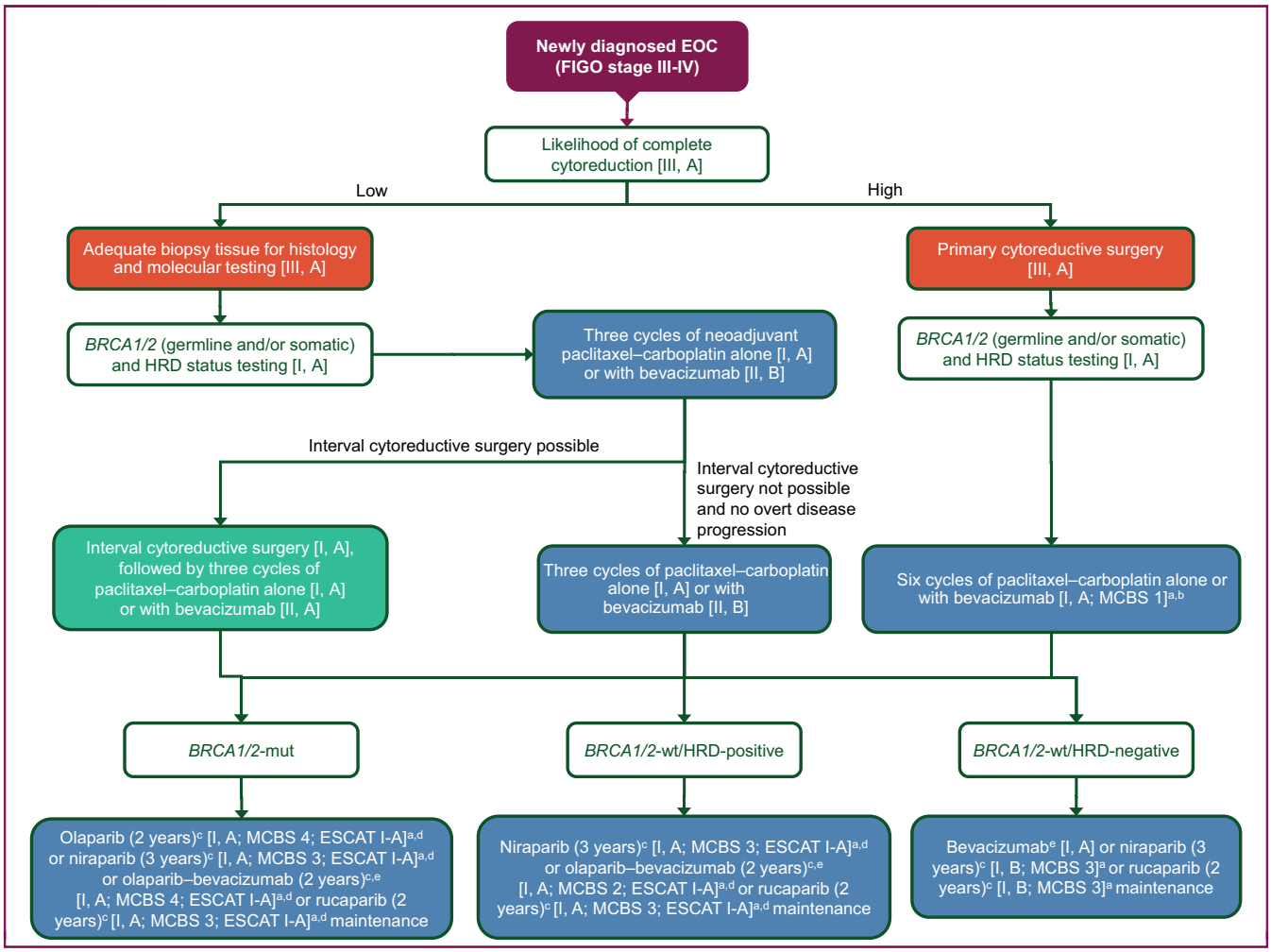

Figure 2. Management of advanced EOC (FIGO stage III-IV).
Purple: algorithm title; orange: surgery; blue: systemic anticancer therapy or their combination; turquoise: non-systemic anticancer therapies or combination of treatment modalities; white: other aspects of management and non-treatment aspects.
AUC, area under the curve; ChT, chemotherapy; CPG, Clinical Practice Guideline; EMA, European Medicines Agency; EOC, epithelial ovarian cancer; ESCAT, ESMO Scale for Clinical Actionability of molecular Targets; ESMO, European Society for Medical Oncology; FDA, Food and Drug Administration; FIGO, International Federation of Gynecology and Obstetrics; HRD, homologous recombination deficiency; MCBS, ESMO-Magnitude of Clinical Benefit Scale; mut, mutation; PARPi, poly (ADP-ribose) polymerase inhibitor; wt, wild type.
[a]ESMO-MCBS v1.1[4] was used to calculate scores for therapies/indications approved by the EMA or FDA. The scores have been calculated and validated by the ESMO-MCBS Working Group and reviewed by the authors (https://www.esmo.org/guidelines/esmo-mcbs/esmo-mcbs-evaluation-forms).
[b]Weekly ChT with paclitaxel (60 mg/m^2)—carboplatin (AUC 2) can be an alternative in frail patients [I, B].
[c]Only when patients have complete or partial response to platinum or no evidence of disease. For patients without response to platinum, a PARPi is not indicated; these patients can be managed with bevacizumab maintenance if appropriate (mainly stable disease), or with second-line therapy if they have progressive disease (see Figure 3).
[d]ESCAT scores apply to alterations from genomic-driven analyses only. These scores have been defined by the authors of the ESMO CPG for EOC,[2] assisted if needed by the ESMO Translational Research and Precision Medicine Working Group.[5] See Supplementary Table S3, available at https://doi.org/10.1016/j.esmoop.2025.105125 for more information on ESCAT scores.
[e]Option for patients for whom bevacizumab was added to paclitaxel—carboplatin.

original ESMO recommendation 5H was modified as per the bold text below and in Table 1 to read as follows:

5H. Patients with relapsed EOC for whom platinum is not an option should be defined by [II-IV, A; consensus = 100%]:

- Proven resistance (progression during platinum)
- Expected resistance (early symptomatic progression post-platinum, response to rechallenge unlikely)
- Platinum intolerance
- Patient **preference**
- Quality of life issues

Regarding recommendation 5K, the Pan-Asian expert panel highlighted that in patients with platinum intolerance, the recommended regimen of trabectedin—PLD resulted in a PFS benefit of only 1.9 months versus PLD in the OVA-301 study.[24] This modest benefit must be weighed against its notable toxicity (mainly haematological and hepatic side-effects). Trabectedin—PLD can, therefore, only be considered for selected patients with good performance status. Less toxic options are available, such as bevacizumab—PLD. The wording of the original ESMO recommendation 5K was modified as per the bold text below and in Table 1 to read as follows:

*5K. In patients with platinum intolerance who have relapsed >6 months from previous platinum, trabectedin—PLD may be **considered** [II, C; ESMO-MCBS v1.1 score: 2 for patients with platinum-sensitive disease; European Medicines Agency (EMA) approved, not Food and Drug Administration (FDA) approved; consensus = 100%].*

The use of trametinib after platinum-based ChT and hormone therapy in patients with recurrent LGSOC (recommendation 5N) was discussed. The phase II/III GOG 281/LOGS study of trametinib in heavily pre-treated LGSOC reported a median PFS of 13.0 months in the trametinib group versus 7.2 months with standard of care (HR 0.48, 95% CI 0.36-0.64).[25] Overall, as the available data show a strong benefit and there are limited options for this patient population, the expert panel agreed with and completely accepted (100% consensus) the original ESMO recommendation 5N (Table 1) without change.

The panel discussed mirvetuximab soravtansine, an antibody—drug conjugate targeting folate receptor α (FRα), which was recently EMA and FDA approved for the treatment of platinum-resistant EOC. The phase III MIRASOL trial in patients with platinum-resistant recurrence and high tumour FRα expression [≥75% of cells with 2+ staining intensity on immunohistochemistry (IHC)] reported longer PFS (5.62 months versus 3.98 months; $P < 0.001$) and OS (16.46 months versus 12.75 months; HR 0.67, 95% CI 0.50-0.89, $P = 0.005$) with mirvetuximab soravtansine versus ChT.[26] Mirvetuximab soravtansine is the first treatment to demonstrate an OS benefit in patients with platinum-resistant disease; therefore, the expert panel agreed that this option should be strongly recommended. It was noted that an FRα assay has been developed. Following these discussions, the Pan-Asian panel of experts agreed that a recommendation on mirvetuximab soravtansine should be included and a new recommendation 5O was proposed to read as follows and in Table 1:

5O. Mirvetuximab soravtansine is recommended as a therapeutic option for patients with FRα expression (≥75% 2+ by IHC) and platinum-resistant relapse after 1-3 prior systemic regimens [I, A; ESMO-MCBS v1.1 score 3; consensus = 100%].

A proposed algorithm for the treatment of recurrent EOC is shown in Figure 3.

6. Follow-up, long-term implications and survivorship — recommendations 6A-6C. The Pan-Asian panel of experts agreed with and completely accepted (100% consensus) the original ESMO recommendations 6A and 6C (Table 1) without change.

The experts discussed the duration of follow-up in patients with *BRCA1/2*-mutated disease in relation to recommendation 6B. The panel agreed that late recurrences are common in this patient population and that patients should be monitored for common second primary cancers (e.g. pancreas, breast, thyroid, melanoma). A long-term study of patients with and without *BRCA1/2*-muts following treatment for ovarian cancer showed that at 3 years after diagnosis, *BRCA1/2*-mut carriers had a better prognosis; however, this did not lead to a long-term benefit, with the two patient populations showing identical survival rates by 12 years after diagnosis.[27] The panel agreed that long-term follow-up is important in this patient population; therefore, the wording of the recommendation should be more assertive. The wording of the original ESMO recommendation 6B was modified as per the bold text below and in Table 1 to read as follows:

*6B. BRCA1/2-mut carriers **should** be considered for follow-up beyond 5 years [III, B; consensus = 100%].*

Applicability of the recommendations

Following the virtual consensus meeting, the Pan-Asian panel of experts agreed and accepted completely (100% consensus) the revised ESMO recommendations for the diagnosis, treatment and follow-up of newly diagnosed and relapsed EOC in patients of Asian ethnicity (Table 1). The applicability of each recommendation is, however, impacted by the individual drug and testing approvals and reimbursement policies in each country. The availability of tests and drugs for the regions represented by the 10 participating Asian oncological societies is summarised in Supplementary Table S5, available at https://doi.org/10.1016/j.esmoop.2025.105125.

CSCO. *BRCA1/2* PCR testing is available in China, but next-generation sequencing (NGS) is more prevalent. NGS is, however, only covered by commercial insurance, which is not affordable for some of the population. HRD tests are not reimbursed as none have been verified in prospective trials. Olaparib, niraparib, bevacizumab, platinum agents and paclitaxel are reimbursed up to 70%-90% of the treatment cost. PLD, gemcitabine and topotecan are not reimbursed in China. Rucaparib is unavailable and is unlikely to be approved by the National Medical Products Administration (NMPA) due to the availability of two other PARPis. Fuzuloparib is NMPA-approved for use as monotherapy in *BRCA1/2*-mutated platinum-sensitive recurrent ovarian cancer after two or more lines of ChT, based on the results of a single-arm phase II study (FZOCUS-3) conducted at 26 sites in China, which reported an objective response rate (ORR) of 69.9% and PFS of 12.0 months.[16] The NMPA also approved fuzuloparib for the maintenance treatment of platinum-sensitive recurrent EOC following the randomised phase III FZOCUS-2 trial, which demonstrated improved median PFS with fuzuloparib (12.9 months) compared with placebo (5.5 months; HR 0.25, 95% CI 0.17-0.36, $P < 0.0001$) in this patient population.[17] The NMPA has also approved fuzuloparib for the first-line maintenance treatment of platinum-responsive EOC based on results from the randomised phase III FZOCUS-1 trial showing a significant

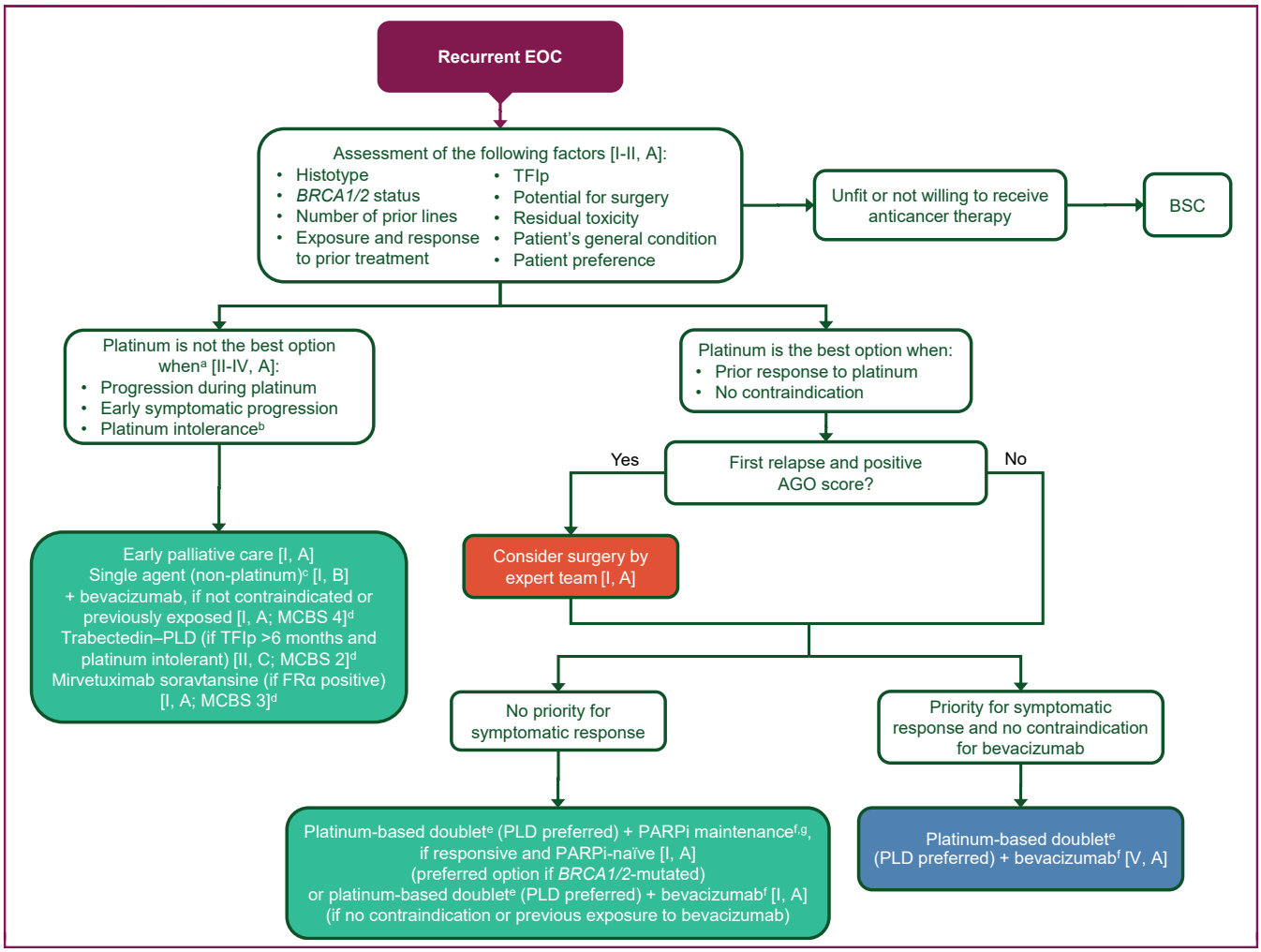

Figure 3. Management of recurrent EOC.
Purple: algorithm title; orange: surgery; blue: systemic anticancer therapy or their combination; turquoise: non-systemic anticancer therapies or combination of treatment modalities; white: other aspects of management and non-treatment aspects.
AGO, Arbeitsgemeinschaft Gynaekologische Onkologie; BSC, best supportive care; EMA, European Medicines Agency; EOC, epithelial ovarian cancer; ESMO, European Society for Medical Oncology; FDA, Food and Drug Administration; FRα, folate receptor α; MCBS, ESMO-Magnitude of Clinical Benefit Scale; mut, mutation; PARPi, poly (ADP-ribose) polymerase inhibitor; PLD, pegylated liposomal doxorubicin; TFIp, treatment-free interval from last platinum.
[a]Patient preference and quality of life issues may also suggest that platinum is not the best option.
[b]In patients with platinum intolerance who have relapsed >6 months from previous platinum, the combination of trabectedin and PLD may be recommended [II, C; ESMO-MCBS v1.1 score: 2 for patients with platinum-sensitive disease; EMA approved, not FDA approved].
[c]Weekly paclitaxel, PLD, topotecan or gemcitabine.
[d]ESMO-MCBS v1.1[4] was used to calculate scores for therapies/indications approved by the EMA or FDA. The scores have been calculated and validated by the ESMO-MCBS Working Group and reviewed by the authors (https://www.esmo.org/guidelines/esmo-mcbs/esmo-mcbs-evaluation-forms).
[e]Paclitaxel, PLD or gemcitabine (carboplatin—gemcitabine—bevacizumab: ESMO-MCBS v1.1 score: 3).[d]
[f]Until disease progression or next line of treatment is started [I, A].
[g]Olaparib for *BRCA1/2*-mutated: ESMO-MCBS v1.1 score: 2;[d] niraparib regardless of *BRCA1/2*-mut status: ESMO-MCBS v1.1 score: 3;[d] rucaparib regardless of *BRCA1/2*-mut status: ESMO-MCBS v1.1 score: 3.[d]

increase in PFS with fuzuloparib versus placebo (median PFS not reached versus 11.1 months, respectively; HR 0.49, 95% CI 0.37-0.67, $P < 0.0001$).[28] This trial also included a fuzuloparib—apatinib arm, which has not yet been reported. Pamiparib is approved in China for the treatment of *BRCA1/2*-mutated recurrent ovarian cancer after two or more lines of ChT based on the results of a single-arm study conducted at 21 centres in China, which reported an ORR of 64.6% for patients with platinum-sensitive ovarian cancer and 31.6% for those with platinum-resistant disease, and median PFS of 15.2 months for patients with platinum-sensitive ovarian cancer and 6.2 months for those with platinum-resistant disease.[29] The safety profiles of fuzuloparib and pamiparib are similar to that of olaparib.[16,17,28,29] Fuzuloparib is reimbursed when used in the recurrent setting.

ISHMO. In Indonesia, NGS, *BRCA1/2* PCR and HRD assays are available but are usually not covered by insurance. Platinum ChT, paclitaxel and gemcitabine are usually reimbursed. Olaparib, bevacizumab and PLD are available and may be reimbursed, depending on the patient's insurance. Niraparib, rucaparib and topotecan are not currently available in Indonesia and are unlikely to be approved in the near future.

ISMPO. Drugs are approved for marketing in India by the Central Drugs Standard Control Organization. Once approved, treatments are available for use, but reimbursement depends on whether the patient has access to private, government or employer-associated health insurance. Approval is not required for biomarker tests, but they are typically expected to align with the guidelines of the Indian Council of Medical Research or the National Cancer Grid of India, coordinated by the Tata Memorial Centre.

The Indian government spent 2.6% of the country's gross domestic product on health care in financial year 2023.[30] There are various systems in operation, including employer-funded health benefits for public sector employees such as central government, railway workers, ex-servicemen and others. The Pradhan Mantri Jan Arogya Yojana (PM-JAY) is a flagship health insurance scheme launched by the government, which aims to provide financial protection to poor and vulnerable families by offering health coverage of up to ∼US$5000 per family per year for secondary- and tertiary-level health care. Over 100 million poor and vulnerable families (∼500 million beneficiaries) are eligible for these benefits. Private health insurance accounts for <20% of health expenditure in India. Out-of-pocket expenditure is still prevalent, although this has reduced from 64.2% to 48.2% of total health expenditure over the past decade.[31]

NGS, *BRCA1/2* PCR and HRD assays are available in India but are not reimbursed by PM-JAY or private insurance. Platinum ChT, paclitaxel, PLD, gemcitabine, topotecan, olaparib, rucaparib and bevacizumab are approved in India but niraparib is not. ChT is freely available through PM-JAY but PARPis and bevacizumab are not; therefore, patients who are not part of another health insurance scheme must cover 100% of these treatment costs.

The advent of generics and biosimilars has improved access to treatments for EOC in India, cutting drug costs by ∼80%. There are now >15 generics available, including generic olaparib as of March 2024.

JSMO. The Japanese health insurance system covers the entire population across various schemes. In general, patients must cover 20% of treatment costs up to compulsory education age, 30% from compulsory education age to <70 years, 20% (30% above a certain level of income) when aged 70-74 years and 10% (30% above a certain level of income) when aged ≥75 years.

NGS, *BRCA1/2* PCR and HRD assays are approved and reimbursed in Japan, although NGS and HRD testing are only approved for use in advanced disease and NGS is not approved for use in previously untreated disease.

Platinum ChT, paclitaxel, PLD, gemcitabine, topotecan, olaparib, niraparib and bevacizumab are all approved and reimbursed. Rucaparib is not yet approved and, if accessed, the patient must pay 100% of the cost of treatment. Irinotecan is also approved in Japan for patients with platinum-resistant ovarian cancer.

KSMO. In South Korea, health care costs are covered by a government-led national health system, which covers 95% of the cost of tests and treatments that meet reimbursement guidelines. NGS, *BRCA1/2* PCR and HRD assays are approved in South Korea, but comprehensive reimbursement (95%) is only available for *BRCA1/2* PCR testing. NGS is reimbursed to 10% and HRD assays are not reimbursed at all. Platinum ChT, paclitaxel, PLD, gemcitabine, topotecan, olaparib, niraparib and bevacizumab are all approved and reimbursed (to 95%), while olaparib and niraparib are only reimbursed when used in *BRCA1/2*-mutated disease. Rucaparib is not approved in South Korea.

MOS. Malaysia has both public and private health care systems, but there is no national health care insurance. The public system is heavily subsidised, but expensive tests and treatments are often not covered, leaving patients with the choice of purchasing private insurance or paying out of pocket.

NGS is approved but not reimbursed by either private or public health care systems. *BRCA1/2* PCR testing is fully reimbursed (100%) under public and private systems; however, the public system only covers selected cases, and private medical insurance will cover *BRCA1/2* somatic mutations but not germline mutations. HRD assays are reimbursed under private medical insurance only (100%).

ChT (platinum agents, paclitaxel, PLD and gemcitabine) is fully reimbursed (100%) under both public and private health care systems. Olaparib, bevacizumab and topotecan are not reimbursed by the public system and are only reimbursed under private medical insurance if the treatment cost is within the patient's annual limit. Niraparib and rucaparib are not currently approved in Malaysia.

PSMO. Government-funded and private health care provision are available in the Philippines, with most of the population (>90%) relying on the government-funded PhilHealth system.

BRCA1/2 PCR and HRD assays are available in the Philippines but are not reimbursed by the government. Private insurance schemes reimburse some (but not all) of the cost of these tests and they can also be freely accessed via pharmaceutical company subsidies. NGS is available but is not subsidised or reimbursed by the government and is rarely reimbursed privately.

PhilHealth can reimburse €100 for every ChT treatment received; otherwise, cancer treatment is almost entirely paid for out of pocket by the patient. The full cost of platinum ChT, paclitaxel, PLD, gemcitabine and topotecan can be reimbursed at some government hospitals; however, this depends on availability of the ChT and these drugs are often out of stock. Olaparib and bevacizumab are available but are not reimbursed by the government. Niraparib and rucaparib are not currently approved in the Philippines; nonapproved drugs can be accessed from other countries, but this is not the norm.

SSO. The entire population of Singapore is covered by national health insurance, which covers basic health care needs. Most people (60%-70%) also have additional health insurance with varying levels of coverage. NGS is available

in Singapore, but somatic NGS is not routinely reimbursed outside of clinical studies. Germline NGS is largely paid for out of pocket by the patient, with some support from industry. *BRCA1/2* PCR is not used in Singapore as NGS is the preferred method. HRD assays are not reimbursed by national health insurance but can be accessed in collaboration with industry or via participation in institutional studies. Out-of-pocket expense for HRD assays is generally minimal and some can be reimbursed via private insurance.

The national health care provision covers ChT used in the treatment of ovarian cancer; therefore, platinum ChT, paclitaxel, PLD, gemcitabine and topotecan are fully funded at no cost to the patient. Bevacizumab biosimilars are also reimbursed, with patients paying minimal (if any) costs. Reimbursement for olaparib and niraparib depends on indication and is means tested based on the patient's ability to pay. Rucaparib is not available in Singapore.

TOS. In Taiwan, 98% of citizens are covered by national health insurance, but resources are limited as the annual growth of the health care budget is limited to $<$5%. Forty percent of citizens have additional private insurance and 2% have no insurance.

NGS, *BRCA1/2* PCR and *BRCA1/2* multiplex ligation-dependent probe amplification tests are available in Taiwan and are partially reimbursed by national health insurance. HRD assays are available but have not been validated in Taiwan so are not widely used or reimbursed, although pharmaceutical companies partially support these tests. Overall, $\sim$50% of patients pay out of pocket for biomarker tests and $\sim$50% receive full or partial reimbursement.

ChT (platinum agents, paclitaxel, PLD, gemcitabine and topotecan) is fully reimbursed by national health insurance at no cost to the patient. Bevacizumab is fully reimbursed (100%) by national health insurance for two specific indications: (i) first-line treatment of stage IV disease; (ii) recurrent disease between 6 and 12 months (i.e. partially platinum-sensitive disease). Outside of these indications, patients must pay the full cost of treatment. Olaparib is reimbursed (100%) by national health insurance for patients with *BRCA1/2*-muts only. Niraparib is reimbursed (100%) for patients with *BRCA1/2*-muts and will soon be reimbursed for patients with HRD-positive disease. Rucaparib is not available in Taiwan.

TSCO. Thailand has three health care systems: the Universal Coverage Scheme (general population), the Social Security Scheme and the Civil Servant Medical Benefit Scheme (CSMBS). NGS, *BRCA1/2* PCR and HRD assays are available but are not reimbursed by any of the health care systems; however, they are partially supported by pharmaceutical companies. Outside of this support, the biomarker tests are only used in select patients who can afford to pay the full cost.

Platinum ChT, paclitaxel and gemcitabine are reimbursed by all schemes, although gemcitabine is reimbursed in platinum-resistant EOC only. PLD and topotecan are fully reimbursed by the CSMBS and partially (flat rate per protocol) by other health care schemes. Bevacizumab is reimbursed for stage IIIB-IIIC disease following suboptimal surgery (residual disease $>$1 cm) and for stage IV disease as adjuvant and/or maintenance therapy (100% by the CSMBS and partially by other schemes). Olaparib is reimbursed (100% only by the CSMBS) as maintenance therapy combined with ChT with or without bevacizumab in advanced disease with *BRCA1/2*-muts. Niraparib is newly approved and, therefore, price and reimbursement negotiations are ongoing. Rucaparib has not been approved in Thailand.

CONCLUSIONS

The results of voting by the Asian experts before and after the virtual meeting showed 75% concordance with the ESMO recommendations for the management of patients with EOC (Supplementary Table S4 and Figure S1, available at https://doi.org/10.1016/j.esmoop.2025.105125). The updated recommendations in Table 1, therefore, constitute the consensus CPG for the management of patients with EOC in Asia. Variations in the availability of diagnostic testing, drugs and, therefore, treatment possibilities between the countries represented reflect the differences in the organisation of regional health care systems and their reimbursement strategies; these will significantly impact the implementation of the scientific recommendations in certain areas. Policy initiatives are advised, based on this guideline document, to improve access to standards of care for all patients across Asia.

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REFERENCES

1. Ferlay J, Ervik M, Lam F, et al. Global cancer observatory: cancer today. Asia. Available at https://gco.iarc.who.int/media/globocan/factsheets/populations/935-asia-fact-sheet.pdf. Accessed September 26, 2024.
2. González-Martín A, Harter P, Leary A, et al. Newly diagnosed and relapsed epithelial ovarian cancer: ESMO Clinical Practice Guideline for diagnosis, treatment and follow-up. *Ann Oncol*. 2023;34(10):833-848.
3. Dykewicz CA. Summary of the guidelines for preventing opportunistic infections among hematopoietic stem cell transplant recipients. *Clin Infect Dis*. 2001;33(2):139-144 [Adapted from: Gross PA, Barrett TL, Dellinger EP, et al. Purpose of quality standards for infectious diseases. *Clin Infect Dis*. 1994;18(3):421].
4. Cherny NI, Dafni U, Bogaerts J, et al. ESMO-magnitude of clinical benefit scale version 1.1. *Ann Oncol*. 2017;28(10):2340-2366.
5. Mateo J, Chakravarty D, Dienstmann R, et al. A framework to rank genomic alterations as targets for cancer precision medicine: the ESMO Scale for Clinical Actionability of molecular Targets (ESCAT). *Ann Oncol*. 2018;29(9):1895-1902.
6. Hirasawa A, Imoto I, Naruto T, et al. Prevalence of pathogenic germline variants detected by multigene sequencing in unselected Japanese patients with ovarian cancer. *Oncotarget*. 2017;8(68):112258-112267.
7. Wu X, Wu L, Kong B, et al. The first nationwide multicenter prevalence study of germline BRCA1 and BRCA2 mutations in Chinese ovarian cancer patients. *Int J Gynecol Cancer*. 2017;27(8):1650-1657.
8. Paik ES, Heo EJ, Choi CH, et al. Prevalence and clinical characterization of BRCA1 and BRCA2 mutations in Korean patients with epithelial ovarian cancer. *Cancer Sci*. 2021;112(12):5055-5067.
9. Gupta S, Rajappa S, Advani S, et al. Prevalence of BRCA1 and BRCA2 mutations among patients with ovarian, primary peritoneal, and fallopian tube cancer in India: a multicenter cross-sectional study. *JCO Glob Oncol*. 2021;7:849-861.
10. Manchana T, Phoolcharoen N, Tantbirojn P. BRCA mutation in high grade epithelial ovarian cancers. *Gynecol Oncol Rep*. 2019;29:102-105.
11. Lertkhachonsuk AA, Suprasert P, Manchana T, et al. Prevalence of tissue BRCA gene mutation in ovarian, fallopian tube, and primary peritoneal cancers: a multi-institutional study. *Asian Pac J Cancer Prev*. 2020;21(8):2381-2388.
12. Bell J, Brady MF, Young RC, et al. Randomized phase III trial of three versus six cycles of adjuvant carboplatin and paclitaxel in early stage epithelial ovarian carcinoma: a Gynecologic Oncology Group study. *Gynecol Oncol*. 2006;102(3):432-439.
13. Takada T, Iwase H, Iitsuka C, et al. Adjuvant chemotherapy for stage I clear cell carcinoma of the ovary: an analysis of fully staged patients. *Int J Gynecol Cancer*. 2012;22(4):573-578.
14. Miller RE, Leary A, Scott CL, et al. ESMO recommendations on predictive biomarker testing for homologous recombination deficiency and PARP inhibitor benefit in ovarian cancer. *Ann Oncol*. 2020;31(12):1606-1622.
15. Pignata S, Scambia G, Ferrandina G, et al. Carboplatin plus paclitaxel versus carboplatin plus pegylated liposomal doxorubicin as first-line treatment for patients with ovarian cancer: the MITO-2 randomized phase III trial. *J Clin Oncol*. 2011;29(27):3628-3635.
16. Li N, Bu H, Liu J, et al. An Open-label, multicenter, single-arm, phase II study of fluzoparib in patients with germline BRCA1/2 mutation and platinum-sensitive recurrent ovarian cancer. *Clin Cancer Res*. 2021;27(9):2452-2458.
17. Li N, Zhang Y, Wang J, et al. Fuzuloparib maintenance therapy in patients with platinum-sensitive, recurrent ovarian carcinoma (FZOCUS-2): a multicenter, randomized, double-blind, placebo-controlled, phase III trial. *J Clin Oncol*. 2022;40(22):2436-2446.
18. Ray-Coquard I, Leary A, Pignata S, et al. Olaparib plus bevacizumab first-line maintenance in ovarian cancer: final overall survival results from the PAOLA-1/ENGOT-ov25 trial. *Ann Oncol*. 2023;34(8):681-692.
19. González-Martín A, Pothuri B, Vergote I, et al. Progression-free survival and safety at 3.5 years of follow-up: results from the randomised phase 3 PRIMA/ENGOT-OV26/GOG-3012 trial of niraparib maintenance treatment in patients with newly diagnosed ovarian cancer. *Eur J Cancer*. 2023;189:112908.
20. Monk BJ, Parkinson C, Lim MC, et al. A randomized, phase III trial to evaluate rucaparib monotherapy as maintenance treatment in patients with newly diagnosed ovarian cancer (ATHENA-MONO/GOG-3020/ENGOT-ov45). *J Clin Oncol*. 2022;40(34):3952-3964.
21. Monk BJ, Barretina-Ginesta MP, Pothuri B, et al. Niraparib first-line maintenance therapy in patients with newly diagnosed advanced ovarian cancer: final overall survival results from the PRIMA/ENGOT-OV26/GOG-3012 trial. *Ann Oncol*. 2024;35(11):981-992.
22. Gulia S, Kannan S, Ghosh J, et al. Maintenance therapy with a poly(ADP-ribose) polymerase inhibitor in patients with newly diagnosed advanced epithelial ovarian cancer: individual patient data and trial-level meta-analysis. *ESMO Open*. 2022;7(5):100558.
23. Gershenson DM, Bodurka DC, Coleman RL, et al. Hormonal maintenance therapy for women with low-grade serous cancer of the ovary or peritoneum. *J Clin Oncol*. 2017;35(10):1103-1111.
24. Poveda A, Vergote I, Tjulandin S, et al. Trabectedin plus pegylated liposomal doxorubicin in relapsed ovarian cancer: outcomes in the partially platinum-sensitive (platinum-free interval 6-12 months) subpopulation of OVA-301 phase III randomized trial. *Ann Oncol*. 2011;22(1):39-48.
25. Gershenson DM, Miller A, Brady WE, et al. Trametinib versus standard of care in patients with recurrent low-grade serous ovarian cancer (GOG 281/LOGS): an international, randomised, open-label, multicentre, phase 2/3 trial. *Lancet*. 2022;399(10324):541-553.
26. Moore KN, Angelergues A, Konecny GE, et al. Mirvetuximab soravtansine in FRα-positive, platinum-resistant ovarian cancer. *N Engl J Med*. 2023;389(23):2162-2174.
27. McLaughlin JR, Rosen B, Moody J, et al. Long-term ovarian cancer survival associated with mutation in BRCA1 or BRCA2. *J Natl Cancer Inst*. 2013;105(2):141-148.

28. Wu L, Li N, Wang J, et al. Fuzuloparib as maintenance therapy among patients with advanced ovarian cancer after a response to first-line platinum-based chemotherapy: results from a randomized, placebo-controlled, phase III trial. *Gynecol Oncol*. 2024;190:S74-S75.
29. Wu X, Zhu J, Wang J, et al. Pamiparib monotherapy for patients with germline BRCA1/2-mutated ovarian cancer previously treated with at least two lines of chemotherapy: a multicenter, open-label, phase II study. *Clin Cancer Res*. 2022;28(4):653-661.
30. Statista. Government healthcare expenditure as a share of GDP in India from financial year 2014 to 2023, with forecast for 2025. Published 2024. Available at https://www.statista.com/statistics/1247848/india-government-healthcare-expenditure-as-a-share-of-gdp/#:~:text=The%20Indian%20government%20spent%202.6,in%20the%20financial%20year%202025. Accessed September 8, 2024.
31. The Economic Times. Your personal health expenditure is still more than the government's, shows Economic Survey 2023. Published 2023. Available at https://economictimes.indiatimes.com/wealth/personal-finance-news/your-personal-health-expenditure-is-still-more-than-the-governments-shows-economic-survey-2023/articleshow/97489759.cms?from=mdr. Accessed September 26, 2024.