NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health Technology Evaluation

Olaparib in combination with bevacizumab for maintenance treatment of advanced ovarian, fallopian tube and peritoneal cancer after response to first-line platinum-based chemotherapy with bevacizumab [Review of TA693] (ID4066)

Final scope

Remit/appraisal objective

To appraise the clinical and cost effectiveness of olaparib in combination with bevacizumab within its marketing authorisation as maintenance treatment of advanced ovarian, fallopian tube and peritoneal cancer after complete or partial response to first-line platinum-based chemotherapy with bevacizumab.

Background

Ovarian cancer is a cancerous growth that occurs in different parts of the ovary or fallopian tubes. The most common type of ovarian cancer, high-grade serous carcinoma, is thought to arise from the fallopian tube and presents after it has spread to the ovary. Ovarian cancer is classified from stage I to stage IV. Advanced ovarian cancer falls within stages II and IV; in stage II the disease has grown outside the ovaries but is still within the pelvic area, stage III denotes disease that is locally advanced and has spread outside the pelvis into the abdominal cavity, and stage IV denotes that distant metastasis to other body organs such as the liver and the pleura (two thin layers of tissue that protect and cushion the lungs) has occurred. Most people are diagnosed with advanced stage disease. Some people have gene mutations that may increase the risk of ovarian cancer. Mutated inherited genes that increase the risk of ovarian cancer include BRCA 1 or 2. Around half of high-grade serous ovarian cancers are positive for homologous recombination deficiency (HRD), a deficiency in DNA double-strand break repair.

The incidence of ovarian cancer increases with age, with incidence rates being highest in females aged 75 to 79[1]. In 2017, 6,236 people were diagnosed with ovarian cancer in England.[2] The 5-year survival for women diagnosed with ovarian cancer between 2013 and 2017, in England was 42.9% for all stages and 26.9% for stage III and 13.4% for stage IV cancer respectively.[3]

NICE technology appraisal guidance 55 recommends paclitaxel in combination with a platinum-based compound or platinum-based therapy alone (cisplatin or carboplatin) as alternatives for first-line chemotherapy (usually following surgery) in the treatment of ovarian cancer.

Bevacizumab (including the unlicensed dose of 7.5 mg/kg every 3 weeks and the licenced dose of 15 mg/kg every 3 weeks) in combination with chemotherapy is available in routine commissioning as induction treatment for selected groups of patients with International Federation of Gynaecology and Obstetrics (FIGO) stage III and stage IV disease, and as a maintenance monotherapy after completion of induction chemotherapy at a dose of 7.5mg/kg.

NICE technology appraisal 598 recommends olaparib for use within the Cancer Drugs Fund as an option for maintenance treatment of BRCA mutation-positive, advanced (FIGO stages III and IV), high-grade epithelial ovarian, fallopian tube or primary peritoneal cancer that has responded to first-line platinum-based chemotherapy in adults.

NICE technology appraisal 673 recommends niraparib for use within the Cancer Drugs Fund as an option for maintenance treatment of advanced (FIGO stages III and IV) high-grade epithelial ovarian, fallopian tube or primary peritoneal cancer after response to first-line platinum-based chemotherapy in adults.

NICE technology appraisal 693 recommends olaparib plus bevacizumab for use within the Cancer Drugs Fund as an option for maintenance treatment of advanced (FIGO stages III and IV) high-grade epithelial ovarian, fallopian tube or primary peritoneal cancer in adults when: there has been a complete or partial response after first-line platinum-based chemotherapy plus bevacizumab, and the cancer is associated with homologous recombination deficiency (HRD). This recommendation is the subject of this evaluation.

The technology

Olaparib (Lynparza; AstraZeneca) in combination with bevacizumab has a marketing authorisation in the UK for the maintenance treatment of adults with advanced (FIGO stages III and IV) high-grade epithelial ovarian, fallopian tube or primary peritoneal cancer:

- who are in response (complete or partial) following completion of first-line platinum-based chemotherapy in combination with bevacizumab, and
- whose cancer is associated with HRD positive status defined by either a BRCA1/2 mutation and/or genomic instability.

Olaparib has a related marketing authorisation in the UK as monotherapy for the maintenance treatment of: advanced BRCA1/2-mutated high-grade epithelial ovarian, fallopian tube or primary peritoneal cancer after response to first-line platinum-based chemotherapy; and platinum-sensitive relapsed high-grade epithelial ovarian, fallopian tube, or primary peritoneal cancer after response to platinum-based chemotherapy.

Intervention(s)	Olaparib in combination with bevacizumab
Population(s)	People with newly diagnosed advanced ovarian, fallopian tube, or primary peritoneal cancer: • with complete or partial response after first-line platinum-based chemotherapy plus bevacizumab, and • whose cancer is associated with homologous recombination deficiency (HRD) positive status

Comparators	• Bevacizumab maintenance therapy at a dose of 7.5 mg/kg (for people who meet the criteria for induction and maintenance treatment with bevacizumab 7.5 mg/kg in the Cancer Drugs Fund) • Routine surveillance
Outcomes	The outcome measures to be considered include: • overall survival • progression-free survival • progression-free survival 2, that is time from randomisation to a progression event after the event used for progression-free survival • time to next line of therapy • adverse effects of treatment • health-related quality of life.
Economic analysis	The reference case stipulates that the cost effectiveness of treatments should be expressed in terms of incremental cost per quality-adjusted life year. The reference case stipulates that the time horizon for estimating clinical and cost effectiveness should be sufficiently long to reflect any differences in costs or outcomes between the technologies being compared. Costs will be considered from an NHS and Personal Social Services perspective. The availability of any commercial arrangements for the intervention, comparator and subsequent treatment technologies will be taken into account. The availability and cost of biosimilar and generic products should be taken into account. The economic modelling should include the cost associated with diagnostic testing for BRCA and HRD status in people with ovarian cancer who would not otherwise have been tested. A sensitivity analysis should be provided without the cost of the diagnostic test. See section 4.8 of the guidance development manual (available here: https://www.nice.org.uk/process/pmg36/chapter/introduction-to-health-technology-evaluation).
Other considerations	Guidance will only be issued in accordance with the marketing authorisation. Where the wording of the therapeutic indication does not include specific treatment combinations, guidance will be issued only in the context of the evidence that has underpinned the marketing authorisation granted by the regulator.

Related NICE recommendations	Related Technology Appraisals: Olaparib plus bevacizumab for maintenance treatment of advanced ovarian, fallopian tube or primary peritoneal cancer (2021) NICE technology appraisal guidance 693. Niraparib for maintenance treatment of advanced ovarian, fallopian tube and peritoneal cancer after response to first-line platinum-based chemotherapy (2021) NICE technology appraisal guidance 673. Olaparib for maintenance treatment of BRCA mutation-positive advanced ovarian, fallopian tube or peritoneal cancer after response to first-line platinum-based chemotherapy (2019) NICE technology appraisal guidance 598. Review date December 2023. Guidance on the use of paclitaxel in the treatment of ovarian cancer (2003) NICE technology appraisal guidance 55. Reviewed August 2015. Related Guidelines: Ovarian cancer: recognition and initial management (2011) NICE guideline CG122. Review date to be confirmed Tests in secondary care to identify people at high risk of ovarian cancer (2017) NICE diagnostics guidance 31 Related Quality Standards: Ovarian cancer (2012) NICE quality standard 18
Related National Policy	The NHS Long Term Plan, 2019. NHS Long Term Plan NHS England NHS manual for prescribed specialist services 2018/2019 (2018) 105. Specialist cancer services (adults) Department of Health, NHS Outcomes Framework 2016-2017 (2016) Domains 1 and 2

References

1. Patient (2016). Ovarian Cancer. Accessed August 2022.

2. Office for National Statistics (2017). Cancer registration statistics, England: 2017. Accessed August 2022.

3. Office for National Statistics (2019). Cancer survival in England - adults diagnosed. 2013 to 2017 dataset. Accessed August 2022.