NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Cancer Drugs Fund review of Technology Appraisal 528

Niraparib as maintenance treatment of recurrent, platinum-sensitive ovarian, fallopian tube and peritoneal cancer that has responded to platinum-based chemotherapy

Final scope

Remit/appraisal objective

To appraise the clinical and cost effectiveness of niraparib within its marketing authorisation as maintenance treatment of recurrent, platinum-sensitive ovarian, fallopian tube and peritoneal cancer that has responded to platinum-based chemotherapy.

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 type, is thought to arise from the peritoneum or 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.

The incidence of ovarian cancer increases with age and average age at diagnosis is 63 years[1]. In 2015, 6,198 people were diagnosed with ovarian cancer in England and there were 3,352 deaths from ovarian cancer in 2015[2,3]. The 5-year survival for women diagnosed with ovarian cancer between 2010 and 2014 and followed up to 2015, in England was 49.5%[4].

Ovarian cancer may be categorised according to the response to initial platinum chemotherapy as follows: platinum-sensitive (disease responds to platinum-based therapy but relapses after 6 months or more, which can be subdivided into fully [disease responds to platinum-based therapy but relapses after 12 months or more] and partially platinum-sensitive disease [disease responds to platinum-based therapy but relapses between 6 and 12 months]); platinum-resistant (disease which relapses within 6 months of completion of platinum-based chemotherapy) and platinum-refractory, that is, does not respond to initial platinum-based chemotherapy. Although a significant percentage of people have disease that responds to initial

chemotherapy, between 55% and 75% of people whose tumours respond to initial therapy relapse within 2 years of completing treatment.

In people whose disease relapses following initial therapy, NICE technology appraisal guidance 389 recommends paclitaxel as monotherapy or in combination with platinum, and pegylated liposomal doxorubicin hydrochloride as monotherapy or in combination with platinum, for treating recurrent ovarian cancer. In addition, NICE technology appraisal 381 recommends olaparib as an option for maintenance treatment of relapsed, platinum sensitive ovarian, fallopian tube or peritoneal cancer in adults who have BRCA1 or BRCA2 mutations and whose disease has responded to platinum based chemotherapy, if they have had 3 or more courses of platinum based chemotherapy.

The technology

Niraparib (Zejula, GlaxoSmithKline) is a poly-ADP-ribose polymerase (PARP) inhibitor which inhibits PARP-1 and PARP-2 proteins. PARP proteins are involved in DNA repair. Niraparib is administered orally.

Niraparib has a marketing authorisation in the UK for the maintenance treatment of adult patients with platinum-sensitive relapsed high-grade serous epithelial ovarian, fallopian tube, or primary peritoneal cancer who are in response (complete or partial) to platinum-based chemotherapy.

Intervention(s)	Niraparib
Population(s)	People with or without a deleterious BRCA mutation who have recurrent, platinum-sensitive ovarian, fallopian tube or peritoneal cancer that is in response following a second course of platinum-based chemotherapy. People who do not have a deleterious BRCA mutation may be in response to their second *or subsequent* course of platinum-based chemotherapy.
Comparators	• Routine surveillance
Outcomes	The outcome measures to be considered include: • overall survival • progression-free survival • progression-free survival 2 (i.e. progression-free survival on next line of therapy) • 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 patient access schemes for the intervention or comparator technologies will be taken into account The economic modelling should include the cost associated with diagnostic testing in people with platinum-sensitive ovarian, fallopian tube and peritoneal cancer who would not otherwise have been tested. A sensitivity analysis should be provided without the cost of the diagnostic test. See section 5.9 of the Guide to the Methods of Technology Appraisals.
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 and NICE Pathways	**Related Technology Appraisals** Olaparib for maintenance treatment of relapsed platinum-sensitive ovarian, fallopian tube or peritoneal cancer (2020). NICE technology appraisal 620. Review date 2 years after publication or when trial results are available. Rucaparib for maintenance treatment of relapsed platinum-sensitive ovarian, fallopian tube or peritoneal cancer (2019). NICE technology appraisal 611. Review date 2 years after publication or when trial results are available. Olaparib for maintenance treatment of relapsed, platinum-sensitive, BRCA mutation-positive ovarian, fallopian tube and peritoneal cancer after response to second-line or subsequent platinum-based chemotherapy (2016) NICE technology appraisal guidance 381. Review date 2 years after publication or when trial results are available.

	Topotecan, pegylated liposomal doxorubicin hydrochloride, paclitaxel, trabectedin and gemcitabine for treating recurrent ovarian cancer (2016) NICE technology appraisal guidance 389. Review date April 2019. Bevacizumab in combination with gemcitabine and carboplatin for treating the first recurrence of platinum-sensitive advanced ovarian cancer (2013) NICE technology appraisal guidance 285. Reviewed May 2013, guidance on static list. **Appraisals in development** Olaparib with bevacizumab for maintenance treatment of advanced ovarian, fallopian tube or primary peritoneal cancer. NICE technology appraisal guidance [ID1684].Publication expected April 2021 Ovarian, fallopian tube and peritoneal cancer – rucaparib. NICE technology appraisal guidance [ID1184]. Publication expected TBC. **Suspended Technology Appraisals** Ovarian (epithelial), fallopian and peritoneal cancer - pazopanib (maintenance). NICE technology appraisal guidance [ID545] Suspended April 2014 Ovarian cancer - vintafolide (with pegylated liposomal doxorubicin). NICE technology appraisal guidance [ID564] Suspended July 2014 **Related Guidelines** Ovarian cancer: recognition and initial management (2011) NICE guideline CG122. Review date to be confirmed **Related Quality Standards** Ovarian cancer (2012) NICE quality standard 18 **Related NICE Pathways** Ovarian cancer (2016) NICE Pathway
Related National Policy	**NHS England** NHS England. 2013/14 NHS Standard Contract for Cancer: Chemotherapy (Adult). B15/S/a. NHS England. 2013/14 NHS Standard Contract for Cancer: Gynaecological. E10/S/f/. **Other policies**

	NHS England (2015) Clinical Commissioning Policy: Genetic Testing for BRCA1 and BRCA2 Mutations Public Health England (2015) Living with and beyond ovarian cancer Department of Health (2016) NHS outcomes framework 2016 to 2017 Independent Cancer Taskforce (2015) Achieving world-class cancer outcomes: a strategy for England 2015-2020 Department of Health (2014) The national cancer strategy: 4th annual report

References

1. Patient (2013). Ovarian Cancer 2013. Accessed November 2016.
2. Office for National Statistics (2015). Cancer Registration Statistics, England 2015. Accessed July 2017
3. Office for National Statistics (2015) Death Registrations Summary Tables – England and Wales. Accessed July 2017.
4. Office for National Statistics (2014). Cancer survival in England: Patients diagnosed between 2010 and 2014 and followed up to 2015. Accessed January 2017.