**BACKGROUND**

Ovarian cancer (OC) • Standard treatment: Debulking surgery with platinum-based chemotherapy.
- 85% of patients who achieve complete remission with 1L therapy experience a recurrence of disease.
- Prognosis is based on clinical and biological factors, including tumour stage and grade, diagnosis of disease, size of the mass, and residual disease after debulking surgery.

Endpoints in clinical trials • OS is regarded as the gold standard primary endpoint in OC clinical trials but requires large trials with a longer duration to demonstrate a difference between treatments vs PFS.
- PFS is commonly used as an endpoint, but in some cancers, it is only weakly associated with OS.

This systematic literature review evaluated the relationship between PFS and OS in adult patients with OC following primary debulking or interval debulking surgery.

**METHODS**

A literature search was conducted using the PICOS framework to identify relevant publications (Table 1).
- Data were extracted by one reviewer and independently checked by another. Discrepancies were resolved by a third reviewer.
- Study quality was assessed against the NICE checklist, Agency for Healthcare Research and Quality checklist, or the Newcastle-Ottawa Scale, depending on study design.
- A weighted linear regression analysis was used to evaluate the correlation between PFS and OS in patients with OC.
- The study weights were calculated as 1/(4 x N).

The weighted linear regression was conducted using a weighted linear regression. The PFS and OS definitions were based on individual study definitions and varied across studies.

Baseline characteristics across studies • The median age of patients in the included studies ranged from 46 to 75 years.
- Most studies (n=45) enrolled patients with mixed FIGO stage (stage I–IV).

Study outcomes • There was a strong positive association between PFS and OS, irrespective of RD status (Figure 2).
- There was a positive association between logHRs for OS and PFS (Figure 3).

**RESULTS**

- 50 primary studies were included (Figure 1):
  - 43 observational studies (41 retrospective and 2 prospective); 4 retrospective analyses of RCTs and 3 RCTs.
  - Sample sizes ranged between 203 and 8,652 patients.
- The PFS and OS definitions were based on individual study definitions and varied across studies.
- OS was defined as either the time from surgery, diagnosis or study entry to death or last follow-up.
- PFS was defined as either the time from treatment to disease progression or disease recurrence, the time from initial diagnosis to the time of first recurrence, or the date that recurrence was confirmed on tissue biopsy or imaging.

**CONCLUSIONS**

- Among patients with OC who had received 1L treatment (primary debulking or interval debulking surgery) and chemotherapy, there was a direct and positive correlation between PFS and OS.

This analysis expands on the growing body of evidence showing that OC treatments effective in delaying disease progression can meaningfully extend OS.

**ABBREVIATIONS**

- OC: ovarian cancer; OS: overall survival; PFS: progression free survival; RCT: randomised controlled trial; RD: risk difference; SE: standard error; SE: standard error.

**REFERENCES**


**ACKNOWLEDGEMENTS**

- The study was funded by GSK (GlaxoSmithKline, Philadelphia, PA, USA; Epidemiology, Oncology, GlaxoSmithKline, Durham, NC, USA).

*Employed by GSK when the research was conducted*