Centralisation of services for gynaecological cancer (Review)

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Centralisation of services for gynaecological cancer

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ABSTRACT

Background
Gynaecological cancers are the second most common cancers among women. It has been suggested that centralised care improves outcomes but consensus is lacking.

Objectives
To assess the effectiveness of centralisation of care for patients with gynaecological cancer.

Search methods
We searched the Cochrane Gynaecological Cancer Group Trials Register, CENTRAL (The Cochrane Library, Issue 4, 2010), MEDLINE, and EMBASE up to November 2010. We also searched registers of clinical trials, abstracts of scientific meetings, and reference lists of included studies.

Selection criteria
We included randomised controlled trials (RCTs), quasi-RCTs, controlled before-and-after studies, interrupted time series studies, and observational studies that examined centralisation of services for gynaecological cancer, and used multivariable analysis to adjust for baseline case mix.

Data collection and analysis
Three review authors independently extracted data, and two assessed risk of bias. Where possible, we synthesised the data on survival in a meta-analysis.

Main results
Five studies met our inclusion criteria; all were retrospective observational studies and therefore at high risk of bias.

Meta-analysis of three studies assessing over 9000 women suggested that institutions with gynaecologic oncologists on site may prolong survival in women with ovarian cancer, compared to community or general hospitals: hazard ratio (HR) of death was 0.90 (95% confidence interval (CI) 0.82 to 0.99). Similarly, another meta-analysis of three studies assessing over 50,000 women, found that teaching
centres or regional cancer centres may prolong survival in women with any gynaecological cancer compared to community or general hospitals (HR 0.91; 95% CI 0.84 to 0.99). The largest of these studies included all gynaecological malignancies and assessed 48,981 women, so the findings extend beyond ovarian cancer. One study compared community hospitals with semi-specialised gynaecologists versus general hospitals and reported non-significantly better disease-specific survival in women with ovarian cancer (HR 0.89; 95% CI 0.78 to 1.01). The findings of included studies were highly consistent. Adverse event data were not reported in any of the studies.

**Authors’ conclusions**

We found low quality, but consistent evidence to suggest that women with gynaecological cancer who received treatment in specialised centres had longer survival than those managed elsewhere. The evidence was stronger for ovarian cancer than for other gynaecological cancers.

Further studies of survival are needed, with more robust designs than retrospective observational studies. Research should also assess the quality of life associated with centralisation of gynaecological cancer care. Most of the available evidence addresses ovarian cancer in developed countries; future studies should be extended to other gynaecological cancers within different healthcare systems.

**Plain Language Summary**

Centralisation of care may prolong survival in women with ovarian cancer, and possibly more generally, gynaecological cancer

Gynaecological cancers are cancers affecting the ovaries, uterus, cervix, vulva, and vagina. They are the second most common cancers among women, after breast cancer. It is often suggested that outcomes are improved by centralising care within highly specialised services that include expert surgeons, radiologists, pathologists, oncologists who specialise in chemotherapy and radiotherapy, specialist nurses and other health professionals. However, consensus is lacking on whether centralisation of care for gynaecological cancer helps patients to live longer. This review investigated this issue by comparing the survival of women diagnosed with gynaecological cancer who received care from specialised and unspecialised centres.

We used a set of tests to ensure that the evidence the five studies identified reached the quality standard for our analysis. The analysis of three studies combined (meta-analysis), assessing over 9000 women, suggested that institutions with gynaecologic oncologists (specialists in the field of gynaecological cancer treatment) on site may prolong the lives of women with ovarian cancer compared to community or general hospitals. Similarly, another meta-analysis of three studies which assessed well over 50,000 women, found evidence to suggest that teaching centres or regional cancer centres (specialised centres) may prolong the lives of women with gynaecological cancer compared to community or general hospitals. The largest study in this meta-analysis assessed all gynaecological cancers in 48,981 women, so it had major influence on the final result; this means that our findings are likely to be relevant to other gynaecological cancers, besides ovarian cancer.

Overall, the findings suggest that centralisation of care may prolong the lives of women with gynaecological cancer, and in particular ovarian cancer. However, the results should be interpreted with caution as all of the studies included in the review could be biased. For example, it is possible that the patients who were treated in specialised centres were less ill to begin with. Another weakness of the review is that only one of the studies included women with gynaecological cancers other than ovarian cancer.

Ideally, further studies in this area are needed. New studies should be designed to avoid the possibility of bias due to the treatment of women at specialist and non-specialist centres being systematically different. Additionally, studies should assess the impact of centralisation of care on the quality of life of patients.

Most of the available evidence was about ovarian cancer in developed countries; future studies should be extended to other gynaecological cancers and to less developed countries.