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Review article

The future for follow-up of gynaecological cancer in Europe. Summary of available data and overview of ongoing trials

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ABSTRACT

After completing treatment, most patients follow a pre-determined schedule of regular hospital outpatient appointments, which includes clinical examinations, consultations and routine tests. After several years of surveillance, patients are transferred back to primary care. However, there is limited evidence to support the effectiveness and efficiency of this approach.

This paper examines the current rationale and evidence base for hospital-based follow-up after treatment for gynaecological cancer. We investigate what alternative models of care have been formally evaluated and what research is currently in progress in Europe, in order to make tentative recommendations for a model of follow-up.

The evidence base for traditional hospital based follow-up is limited. Alternative models have been reported for other cancer types but there are few evaluations of alternative approaches for gynaecological cancers. We identified five ongoing European studies; four were focused on endometrial cancer patients and one feasibility study included all gynaecological cancers. Only one study had reached the reporting stage. Alternative models included nurse-led telephone follow-up and comparisons of more intensive versus less intensive regimes. Outcomes included survival, quality of life, psychological morbidity, patient satisfaction and cost effectiveness of service.

More work is needed on alternative strategies for all gynaecological cancer types. New models will be likely to include risk stratification with early discharge from secondary care for early stage disease with fast track access to specialist services for suspected cancer recurrence or other problems.

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Introduction

Each year there are approximately 250,000 new diagnoses of gynaecological cancer in Europe [1], many of whom would require follow-up after completing their treatment. This represents an enormous investment of clinical resource in providing ongoing care with surprisingly little quality evidence to suggest that cancer follow-up makes a difference in either improving survival or quality of life. A survey of European practice concluded that gynaecological oncologists rate the evidence base to guide practice for follow-up as 'low' or 'very low' [2]. If improved survival is not a realistic goal of scheduled hospital-based surveillance then models of delivery of care should be more flexible to meet the individual needs of patients. While benefits of follow-up might be questionable, patients often experience long-term side effects following their treatment and may experience psychological or psychosexual issues [3,4]. In addition, patients often experience anxiety prior to their appointments for cancer follow-up [5–8] and brief consultations may not provide opportunities for discussion of emotional problems and concerns. This paper seeks to examine the current rationale and evidence for hospital-based follow-up for women who have completed treatment for gynaecological cancer. We investigate what alternative models of care have been evaluated and what research is currently in progress across Europe. The aim is to provide recommendations for follow-up care pathways which are flexible to the needs of patients with different gynaecological tumours and in different healthcare settings.

Routine follow-up in oncology practice

Following treatment for cancer, patients usually have a series of hospital-based medical-led follow-up appointments with a prescribed schedule of visits for several years. The most common duration of routine follow-up is for at least five years [2,9]. The reported aim of regular follow-up is to allow detection of recurrent disease before symptoms develop, allowing earlier treatment with a possible improved outcome, as well as providing an opportunity to provide information and signal early and late consequences of treatment. For follow-up to be effective in this context, the management of recurrence must be amenable to an intervention which itself leads to an improved survival [10]. However, for many cancers, recurrences are not commonly identified in asymptomatic patients at follow-up consultations and most recurrences are reported as interval events [11]. There is limited evidence that hospital-based follow-up impacts on survival, indicating that other outcomes such as psychological morbidity and quality of life should be a priority for any follow-up regime. Prioritising these outcomes can be justified as patients consistently report problems associated with cancer and its treatment, including physical problems, impaired quality of life, psychological distress, sexual problems, relationship problems and financial concerns [12].

Alternatives to traditional doctor-led hospital-based follow-up have been evaluated for different cancer types. A systematic review on follow-up of cancer in primary versus secondary care reported weak evidence that primary care follow-up was effective [4]. Patients treated for breast and colorectal cancer have reported high levels of satisfaction with nurse-led telephone follow-up [13–15]. In the United Kingdom (UK), the National Cancer Survivorship Initiative (NCSI) and the more recent Living With and Beyond Cancer (LWBC) programme both advocated an individualised approach to follow-up based on risk stratification, concentrating care for those perceived to be at a greater risk of recurrent disease and for other issues that arise as a consequence of diagnosis or treatment [16].

Follow-up in gynaecological oncology

For gynaecological cancers, follow-up is mainly delivered by doctors in secondary care [9] and there is very little quality evidence to inform guideline developers in relation to gynaecological oncology follow-up [17]. Eighty per cent of all gynaecological cancer recurrences generally occur in the first two years after treatment [18] and follow-up visits are more frequent during this time. An appointment usually consists of a consultation, a physical examination and consideration for routine tests such as a serum CA125 for ovarian cancer patients or cervical or vaginal cytology for cervical cancer patients [19–22]. Few routine tests are recommended in gynaecological practice for cancer follow-up and are usually requested only if they are clinically indicated.

Endometrial cancer recurs in less than 20% of cases of which 15% is located only in the vagina and amenable to re-cure [23–29]. Recurrence of endometrial cancer is often symptomatic although reported to vary from 40 to 91% [23–25,27,28,30–32]. Most recurrences (70–95%) occur within three years of initial treatment [31,33]. Symptomatic recurrences of endometrial cancer may have a worse prognosis than asymptomatic recurrences, as reported from recent studies carried out in Italy and Japan [34,35], although evidence is conflicting as other studies showed no such differences [23,36,37]. There is no consensus on what tests should be offered for endometrial cancer follow-up [31]. The Society for Gynecologic Oncology recommends a pelvic examination at each visit but suggests that routine CA125 testing, chest radiography and vaginal cytology is controversial and that there is no randomised data to guide practice [38]. The European Society for Medical Oncology recommends clinical examination only [33].

To date only one randomised controlled trial (RCT) on endometrial cancer follow-up has been reported [39]. The ENDCAT trial recruited 259 patients, randomised to nurse-led telephone follow-up or standard hospital-based follow-up, in a non-inferiority trial for all stage one endometrial cancers. Patients were recruited at five centres across the North West of England. The primary outcomes were psychological morbidity and satisfaction with information. Secondary outcomes included satisfaction with the follow-up service, quality of life, cost effectiveness and time to detection of recurrence. Nurse-led telephone follow-up was not inferior to hospital-based follow-up in terms of psychological morbidity, patient satisfaction and quality of life. There were no differences between groups in time to detection of recurrent disease.

About 70% of patients with ovarian cancer are diagnosed in advanced stage and about 70% of these will relapse [40]. The tumour marker CA125 is superior to all other tumour markers in the detection of early recurrence in ovarian cancer. The National Cancer Institute consensus statement for follow-up has recommended that asymptomatic patients should include a CA125 assay as part of each routine visit. Pre-clinical elevation of CA125 is seen several months prior to clinical recurrence [41]. A review by Piovano et al. (2014) looking at HE4 currently has no recommendation regarding its incorporation into clinical practice [42] although elevated levels may be more sensitive at detecting relapse then serum CA125 [43]. The use of other tumour markers such as CEA and routine imaging have not been recommended for