

EXTENSIVE DEBULKING SURGERY FOR ADVANCED STAGE OVARIAN CANCER

Jafaru Abu

Consultant gynaecological oncologist

Nottingham University Hospital Cancer Centre

Nottingham

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Introduction

According to the latest Cancer Research UK website, there were 7,116 new cases of ovarian cancer in 2011. In the UK between 2009-2011, three-quarters (75%) were diagnosed in women aged 55 and over. It is the 4th most common cause of death among females in the UK accounting for 6% of all female deaths from cancer. In 2011, there were 4,272 deaths from ovarian cancer in the UK.

Most women who have ovarian cancer present with advanced disease and the outcome is

generally poor, with an overall 5-year survival rate of 35%. The stage of the disease at diagnosis is the most important factor, affecting outcome and is defined by the International Federation of Gynecology and Obstetrics (FIGO) system.

The main treatments for ovarian cancer are surgery and chemotherapy. Surgery usually involves bilateral salpingo-oophorectomy, total abdominal hysterectomy and omentectomy. Potentially curative surgery requires resection of all macroscopic disease. More commonly, the goal is to reduce the diameters of the remaining pieces of tumour tissue to less than 1 cm (optimal debulking) or complete debulking with no visible disease.

Various studies, although non-randomized have consistently showed significantly improved overall survival in women who have had optimal or complete tumour debulking compared to those with bulky residual disease after surgery.

England has the lowest survival rate for ovarian cancer in Europe. It is estimated that in the UK, if survival rates matched the best survival rates in Europe, 500 women's lives would be saved every year. According to a recent government-funded research, women who are diagnosed with advanced ovarian cancer are less likely to survive in the UK than in other Western countries around the world. It also suggests that their **treatment may not always be as good as in these other affluent countries where survival is much better.**

The UK's record on ovarian cancer was compared with that of four other countries: Australia, Canada, Denmark and Norway. **Overall in the UK, 69% of women survived for more than a year after diagnosis, compared with 72% in Denmark and 74-75% in the other three countries.**

But survival in the UK was lower for those women diagnosed with advanced cancer. **In women over 70, only 35% with late stage cancer survived for a year, compared with 45% in Canada.**

The results of the study were described as "disturbing" by Cancer Research UK. **They show clearly that the poor survival rates are not due to women delaying going to their GPs with their symptoms, as has often been suggested. That happens just as much in some other countries such as Denmark, where survival is better than in the UK.**

Instead, **it looks likely that the issue is with the care some women receive – and more likely about the standard of surgery than about drugs since chemotherapy is more or less a standard approach. The only non-standardized treatment is the surgical management.** It has long been recognized that the UK gynaecological oncology surgeons are more conservative in the radical surgical management of advanced ovarian cancer.

Data from more than 20,000 women between 2004 and 2007 showed that all five countries had similar proportions of patients being diagnosed at each stage of the disease suggesting that **late presentation is not the reason why women are less likely to survive here.** The only variable factor is surgical management. As a result, many Cancer Centres in the UK are playing catch-up and adopting ultra-radical surgery either as primary or delayed surgical approach in the management of carefully selected group of patients with advanced ovarian/fallopian tube/primary peritoneal cancer.

NICE Statement

Over the last 2 years, many major Cancer Centres across the UK have started a move to encourage ultra-radical surgery in women who have good performance status but with an advanced stage ovarian cancer. Hence, in 2013, NICE issued a document on the guidelines for performing ultra-radical surgery (IP 964). The aim of ultra-radical surgery for advanced ovarian cancer is to remove all visible disease and thereby improve survival compared with standard, less radical surgery.

Extensive or ultra-radical surgery for advanced ovarian cancer is a development and extension of standard surgery. In addition to techniques used in standard and radical surgery (including hysterectomy, bilateral excision of ovary and fallopian tubes), ultra-radical surgery incorporates at least 1 of the following:

- 1. extensive peritonectomy, including partial resection of the diaphragm**
- 2. resection of subcapsular liver metastases, cholecystectomy**
- 3. splenectomy, resection of the tail of the pancreas**
- 4. other bowel resections, partial gastrectomy**

The NICE document critically appraised current studies looking at the benefits of ultra-radical surgery and came up with recommendations and guidance as follows:

1. This procedure should not be done except with special arrangements for clinical governance, consent and audit or research (with the objective of publishing outcomes for all patients having this procedure)
2. Clinicians wishing to undertake ultra-radical surgery for advanced ovarian cancer should take the following actions:
 - **Inform the clinical governance leads in their NHS trusts**
 - **During the consent process, inform patients clearly about alternative treatment options, and about their benefits and risks compared with ultra-radical surgery for advanced ovarian cancer. Clinicians should provide patients with clear written information**
 - **Clinicians should submit data on all patients having this procedure to the national register when it becomes available and review clinical outcomes locally**
 - **Selection of patients should be done by a specialist gynaecological cancer multidisciplinary team**
 - **Ultra-radical surgery for advanced ovarian cancer should be done by collaboration between surgeons with appropriate expertise (such as specialists in gastrointestinal and hepatobiliary surgery) and/or by specialists in gynaecological cancer surgery**

References

1. What if cancer survival in Britain were the same as in Europe: how many deaths are avoidable? Abdel-Rahman M et al: *Br J Cancer* 2009 Dec 3; 101:115-24
2. NICE - Interventional procedure overview of ultra-radical (extensive) surgery for advanced ovarian cancer IP 964 [IPG470]
3. Ultra-radical (extensive) surgery for advanced ovarian cancer NICE interventional procedure guidance 470, November 2013
4. Cancer survival in Australia, Canada, Denmark, Norway, Sweden, and the UK, 1995–2007 (the International Cancer Benchmarking Partnership): an analysis of population-based cancer registry data. *M P Coleman et al, and the ICBP Module 1 Working Group. Lancet* 2011; 377: 127–38

Appendix I

Information Leaflet on Extensive Ovarian Cancer Surgery

Nottingham University Hospitals

Cancer Centre

A guide for patients undergoing extensive (ultra-radical) surgery for advanced ovarian cancer

Introduction

Ovarian cancer is the fifth most common cancer affecting women in England and Wales.

Most women are diagnosed at a late stage in the disease, which means that it may not be possible to cure it. Treatment usually involves a combination of surgery and chemotherapy for most women.

This leaflet has been written to help you understand the surgery required for ovarian cancer and to help answer some of the questions that you may have.

Your doctor has told you that you have a likely diagnosis (or) confirmed diagnosis of advanced ovarian cancer. Depending on what your CT scan has shown, your doctor may discuss one of the following treatment schedules

- Surgery (primary surgery) first followed by chemotherapy.
- Chemotherapy (3 cycles) followed by surgery (delayed primary surgery) and then further chemotherapy

The surgery

Standard surgery (sometimes called radical surgery) for ovarian cancer usually involves removal of the ovaries and fallopian tubes along with the womb and the omentum (fatty membrane covering the organs inside your tummy). The lymph glands may also be removed if they are found to be enlarged on your CT scan.

Ultra-radical (extensive) surgery for advanced ovarian cancer is performed to remove all the visible cancerous tissue from inside your tummy. The idea is that it will improve survival compared to standard surgery.

Ultra-radical surgery will involve removal of more tissue when compared to standard surgery. So, in addition to removing the ovaries, fallopian tubes, womb and the omentum, the surgeon will also remove visible cancerous tissue from other organs such as

- Bowel
- Diaphragm
- Spleen
- Liver
- Peritoneum (membrane covering the inside of your tummy and internal organs)

If you have bowel removed during the operation, you may have a stoma (an opening on the tummy wall for waste to pass). This may be temporary or permanent.

The health care team

During your treatment, you will be looked after by a team of health care professionals who specialise in caring for women with gynaecological cancer. This will include surgeons, medical oncologists, radiologists, and clinical nurse specialists (CNS).

You are being offered ultra-radical surgery because your team have decided that you may be suitable for this procedure.

The surgery will be performed by specialists in gynaecological cancer surgery. Sometimes, other specialists may be involved in your operation such as

- Gastrointestinal (bowel surgeons)
- Hepatobiliary (surgeons who treat conditions involving the liver, pancreas and spleen)

Consent to treatment

The doctors and nurses will discuss the procedure that has been recommended for you in detail and explain how it will affect you. Once you are satisfied with the explanation and have had all your questions answered, you will be asked to sign a consent form for the operation

You will also be asked for permission to collect details of your operation to record and review what happens to women who have this operation. You may be asked to complete a quality of life questionnaire before and after treatment.

What are the benefits of the operation?

The benefits of the operation depend on whether the surgeon is able to remove all visible cancer tissue. The aim of the operation will be to remove all visible cancer in order to reduce the chances of the cancer coming back.

Are there any alternatives to the surgery?

All treatments carry risks as well as benefits. Your health care team will discuss the alternative option which is chemotherapy alone. The risks and benefits of this approach will be discussed with you.

What happens if I do not wish to have any treatment?

Your wishes will be respected if you do not wish to have any treatment. If you do not have any treatment, the cancer will progress and your health will deteriorate. At this time, you may wish us to transfer your care to the Palliative Care team. They will discuss what will happen next and help you to manage your symptoms. This can be done at home, in the hospital or at your local hospice.

Are there any risks?

NICE (National Institute of Health and Care Excellence) has said that removing all visible cancerous tissue offers the best chance of improving survival. However, this is a risky procedure which may make women more ill. The possible survival benefit has to be weighed against the risks of the procedure.

The following risks are associated with standard surgery for ovarian cancer

- Bruising or infection to the wound
- Blood transfusion may be required to replace the blood loss during the operation
- Internal bleeding can sometimes occur after the operation and may need a second operation to control it.
- An internal infection may occur. Treatment with antibiotics through a drip is usually necessary. Occasionally a second operation may be required.
- Blood clots in the legs or pelvis (deep vein thrombosis or DVT). This may result in a blood clot in your lungs (pulmonary embolism or PE). You will be given special stockings (TED stockings) to wear after the operation to prevent these clots. You will

also be given injections to thin down your blood and reduce your risk of forming clots for 4 weeks after the operation. You will be encouraged to move about as soon as you are able to after the operation.

- Injury to major blood vessels, bowel, urinary tract (bladder and the tubes that carry urine to the bladder) and nerves can occur during the operation.
- Your bladder and bowel may take some time to work after the operation.

Studies have shown that the following risks are associated with ultra-radical surgery for ovarian cancer

- Significantly more serious complications than standard surgery
- Bleeding, which needed another operation
- High temperature (more than 38°C) for more than 3 days
- A build up of fluid around the lungs, which had to be drained
- Fluid leaking from the pancreas which had to be drained
- Air may collect in the chest cavity which may cause the lungs to collapse
- Your chemotherapy may be delayed because you are not well enough
- The risk of death is approximately 1%.

What happens if I agree to go ahead with the surgery?

Before admission

If you are happy to go ahead with the surgery, you will be given a date for the procedure and a date for the pre-operative assessment clinic. You will be seen by the clinical nurse specialists who will talk to you about your general health, your previous medical history, and your medication. You will be seen by a doctor who will examine you. You will be asked

to sign a consent form for the procedure. You will also have a number of routine tests (blood, heart and lung tests) during this visit. A physiotherapist will see you in clinic.

The nurses will give you information about what happens during your stay in hospital and also discuss your plans for going home. You will be advised to make arrangements for family and/or friends to support you when you leave hospital.

You will be seen by the anaesthetist in the pre-operative assessment clinic. Sometimes they may see you on the day of the operation. He/she will discuss the anaesthetic and pain relief with you.

Sometimes, you may be seen by a stoma nurse before the operation. This does not mean that you will definitely have a stoma, but there is a small risk that you may need one.

If you have any questions after you have left the clinic, you can contact the nurse specialists who will be able to help you. (Contact numbers are given at the end of this leaflet)

Admission to hospital

You will be admitted to hospital the day before the operation. It is likely that you will be given bowel preparation before the surgery. This is a drink to clear your bowel before surgery and will make you go to the toilet several times. Once you have the bowel preparation, you should drink fluids only. You may be started on fluids through a drip to stop you from getting dehydrated.

You will be given special stockings to prevent the risk of blood clots in your leg. You will also be given injections every day to thin your blood.

After the operation

After the operation, you will be cared for in the recovery unit in theatre for monitoring. You will then be transferred to the ward. Occasionally, you may be transferred to critical care from recovery if you need to be monitored closely. Your stay in the critical care unit may vary between overnight to a few days.

You will have a drip in your arm so that we can give you fluids and pain relief after the operation. This will be removed when you are able to eat and drink.

You will have a tube in your bladder (catheter) to allow the urine to drain. This allows us to monitor how well your kidneys are working. This is usually removed after a period of 24 to 48 hours or when you are able to walk to the toilet to pass urine.

Some women will have a tube in their tummy (drain). This is usually removed the day after the operation.

Occasionally, there may be a tube in your nose (nasogastric tube or NG tube) to drain the fluid in your stomach and stop you from feeling sick. You will be able to talk and breathe while the tube is in. It will be removed once you are able to drink without being sick.

Very rarely, some women may need to be given a feed through a drip in the neck or their elbow. This is called total parenteral nutrition (TPN). If you need this, you will be monitored everyday by the nutrition team.

You will have stitches or staples on your skin which will be removed 10-14 days after surgery.

You will be reviewed daily by your team of doctors and nurses.

You will see a physiotherapist who will help you with breathing/coughing and movement exercises.

If you have a stoma, you will be seen by the stoma nurses, who will teach you how to become independent with emptying and changing your bag.

Assessment for home

Your stay in hospital may be between 7-10 days. This is assessed individually depending on the following

- Eating and drinking normally
- Bowels working (or stoma functioning and you are independent)
- You are comfortable enough to make the journey home
- You will be independent and will be able to manage at home.

Counselling and psychological support

Patients and relatives may have difficulty coming to terms with illness, the effects of the treatment and the effects of surgery. As part of your care, your team will discuss these issues or concerns. If required, your team may refer you to a trained counsellor with your consent.

Follow up

Your GP will be informed of your discharge from hospital. A district nurse may be arranged to remove your staples at home. You will be seen in the outpatient clinic 2-3 weeks later with the results. At this time, you will also see the chemotherapy specialists to discuss further treatment.

What happens if I have any problems after I am discharged home?

If you have any problems or have any questions after discharge, you can contact your key worker or the clinical nurse specialists who will advise you or arrange for you to be seen.

Support groups and useful organisations**1. Macmillan Cancer Support**

89 Albert Embankment, London, SE1 7UQ

Freephone 0808 808 0000

Website: www.macmillan.org.uk

2. Ovacome

PO Box 6294, London, W1A 7WJ

Telephone: 020 7299 6654

Website: www.ovacome.org.uk

3. National Institute for Health and Care Excellence

Website: www.nice.org.uk