

# education

**FROM THE JOURNALS** Edited highlights of Richard Lehman's blog on <http://bmj.co/Lehman>

## Kids' kidneys and long term trouble

One of the largest long term cohorts of young people in the world is provided by the Israeli Army. Health reviews before compulsory military service provided medical data on more than 1.5 million conscripts from 1967-97, and these were then compared with a national registry of end stage renal disease. A history of any childhood kidney disease was associated with a hazard ratio for end stage renal disease of 4.19 (95% confidence interval 3.52 to 4.99). A striking finding was that having kidney disease as a child was often followed by apparent normalisation of kidney function in adolescence, and yet the added risk of end stage renal disease as an adult persisted.

• *N Engl J Med* doi:10.1056/NEJMoa1700993

## Pharmacist review to reduce readmissions

What is the answer to polypharmacy? Time with the patient. Whose time? Here it was a hospital pharmacist's. Don't stop reading here if you don't work in a hospital, because this study has lessons for everyone, including all those with relatives on multiple drugs. "In a randomised clinical trial of 1467 Danish participants receiving at least five medications, a statistically significant reduced rate of readmissions within 30 and 180 days after inclusion was observed in patients randomised to receive an extended pharmacist intervention compared with those who received usual care or a basic pharmacist intervention." Note that it was the extended intervention that worked: this needed half an hour to find out properly about patients' understanding of their treatments and when to seek help. Everybody on a list of medications deserves this, whether or not it reduces admissions. It's a



## Living kidney donors and the price of altruism

If you want to donate a kidney while still alive, I think you should read this. But you are unlikely to be put off by it. It's a systematic review of long term outcomes which shows that all health risks are the same as for non-donors, except for end stage renal disease; or, if you are able to get pregnant, pre-eclamptic toxæmia. For donors, there is an increase in risk that seems alarming (8 and 2, respectively) if given in relative terms, but is tiny as an absolute.

• *Ann Intern Med* doi:10.7326/M17-1235

human right to know what the things you are given might do to you.

• *JAMA Intern Med* doi:10.1001/jamainternmed.2017.8274

## Antithyroid drugs in pregnancy

Between 2008 and 2014, nearly 13 000 South Korean women took antithyroid drugs during the first trimester of pregnancy. Theoretically, the figure should have been zero, because the risk of congenital malformations from these drugs has long been known, so women likely to conceive should strenuously avoid

them. But of a cohort of 2 886 970 completed pregnancies, perhaps this figure is as good as real life can get. Data from the national database allow us to quantify the risks associated with methimazole and propylthiouracil. In the UK, only cats can get methimazole, whereas humans using the NHS have to make it themselves by metabolising carbimazole. Same end result. Again, framing is everything. The relative risk increase for malformations is small: 7.27% compared with 5.94% in unexposed women. But given in absolute terms, it sounds a bit alarming: an extra 17 cases per thousand with methimazole, or 16.5 with propylthiouracil.

• *Ann Intern Med* doi:10.7326/M17-1398

## Worth looking for PE in syncope?

In 2016, an Italian study in the *New England Journal of Medicine* put the prevalence of pulmonary embolism in patients admitted to hospital for syncope at 17%. The authors recommended including D-dimer as part of an assessment pathway for people arriving with syncope. But this figure was out of line with most other studies, and here comes a new one from 1.6 million people arriving in hospital emergency rooms with syncope across four countries. The prevalence of pulmonary embolism at 90 days of follow-up ranged from 0.14% to 0.83% for all patients and from 0.35% to 2.63% for hospitalised patients. "Pulmonary embolism was rarely identified in patients with syncope. Although pulmonary embolism should be considered in every patient, not all patients should undergo evaluation for pulmonary embolism."

• *N Engl J Med* doi:10.1056/NEJMoa1602172

• *JAMA Intern Med* doi:10.1001/jamainternmed.2017.8175





P. MARAZZI/SPL



MIRIAM MASLO/SPL

Better intraoperative visibility, minimal scarring, and faster recovery are some of the main advantages of laparoscopic surgery

### Which medications are usually prescribed?

Patients are usually discharged from hospital with simple analgesia. Sometimes it is appropriate to provide medication to counteract the side effects of analgesia (such as laxatives, antiemetics, or proton pump inhibitors), and thromboprophylaxis. Such treatments are provided by the operating team, and do not generally require involvement of the general practitioner.

#### Thromboprophylaxis

All patients receive daily pharmacological prophylaxis for the duration of their hospital stay. Venous thromboembolism—ie, deep venous thrombosis or pulmonary embolism—is not common after laparoscopic surgery, occurring in less than 1% of patients.<sup>11</sup> The duration of thromboprophylaxis depends on the procedure that has been performed. The National Institute for Health and Care Excellence (NICE) advises using extended pharmacological venous thromboembolism prophylaxis for 28 days following cancer surgery,<sup>12</sup> which might be important to consider if patients present to primary care with falls or bleeding during this period. Although NICE does not specifically provide recommendations for bariatric procedures, obesity is a risk factor for venous thromboembolism, and such patients usually also receive extended prophylaxis.<sup>13</sup> There is no clear evidence to say which type of pharmacological prophylaxis is best; individual units or surgeons might have preferences. Where appropriate, patients are taught to inject themselves with heparin. If anticoagulant therapy was stopped preoperatively, patients are usually able to recommence this before or at the point of discharge.

#### Wound care

Subcuticular absorbable sutures are the most commonly used materials for closing laparoscopic wounds, so that suture removal is unnecessary. Total resorption times vary from 40 to 120 days. Simple adhesive dressings are typically applied to each wound, although there is no evidence to suggest that dressings reduce the rate of wound infection.<sup>14</sup> Increasingly, skin glue is being used as a “dressing,” with the advantage that it renders the wound waterproof, meaning patients can shower immediately after surgery.<sup>15</sup> Patients with adhesive dressings are generally advised to avoid soaking the wounds in water for a few days after surgery. Unless there is excessive discharge of fluid from the wounds, there is generally no need to replace the dressings once they have fallen off. A degree of separation of the wound edges is common and does not require assessment or intervention, unless there is concern about the deeper (muscular) layers.

#### Analgesia

Pain after laparoscopic surgery can cause discomfort, sleep deprivation, and poor mobility, and can result in delayed discharge or readmission to hospital. To control pain at home, encourage patients to take analgesics pre-emptively and regularly. Paracetamol is the most commonly used analgesic because it is effective, cheap, and safe. In the absence of contraindications, non-steroidal anti-inflammatory drugs can be used,<sup>10</sup> and these are often combined with paracetamol and a weak opioid, such as codeine. Stronger opioids (oral morphine, tramadol, or oxycodone) are less frequently required at the point of discharge from hospital. The duration of analgesia regimen depends on the type of operation that has been performed. For appendicectomy or cholecystectomy, patients often require regular analgesia for the first week after surgery, reducing to “as required” after that. Following larger operations (eg, for gastrointestinal cancer), patients might require regular analgesia for longer.

#### EDUCATION INTO PRACTICE

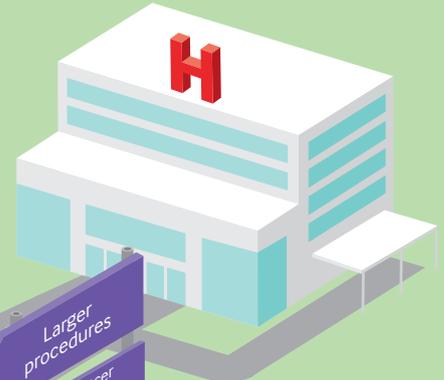
- After reading this article, how might you better assess patients following laparoscopic surgery?
- What difficulties have you encountered when managing patients who have had laparoscopic surgery?
- How did/could you overcome these?

# The road to recovery

After laparoscopic surgery



Laparoscopy has revolutionised the field of abdominal surgery over the past 30 years, allowing surgeons to perform operations without the need for a large abdominal incision. Recovery times are typically much shorter than for open surgery, and may be as short as 1-2 weeks, depending on the procedure that has been performed. This infographic shows some of the key milestones and hazards along the road to recovery



### Pain

Should subside after 24 hours. Worsening post-operative pain suggests a potential abdominal complication, and the patient requires urgent assessment

**Smaller procedures**  
 Appendicectomy  
 Cholecystectomy  
 Hernia repair

### Larger procedures

Larger cancer procedures



### Swellings

May indicate:

- Abscess
- Seroma
- Haematoma



### Analgesics

Smaller procedures:  
 Regular for 1st week  
 As required after

Larger procedures:  
 Regular analgesia may be needed for longer



### Driving

Before driving, patients need to be able to:

- Apply an emergency brake
- Look in their blind spot
- React quickly enough

Smaller procedures:  
 May be able to drive after 1-2 weeks

Larger procedures:  
 May have to wait longer



### Infection

Antibiotics may be required for patients with wounds that are:

- Swollen
- Tender
- Red
- Oozing
- Hot

Refer patient urgently to hospital if there is concern about deeper infection



### Return to work

Usually an individual decision, based on patient's occupation and operation performed

Smaller procedures:  
 May only need 2 weeks off work

Larger procedures:  
 A longer break may be needed  
 Consider gradual return to work



### Heavy lifting

Patients advised initially not to lift anything heavier than a kettle or a shopping bag until:

Smaller procedures: 1-2 weeks  
 Larger procedures: 4 weeks



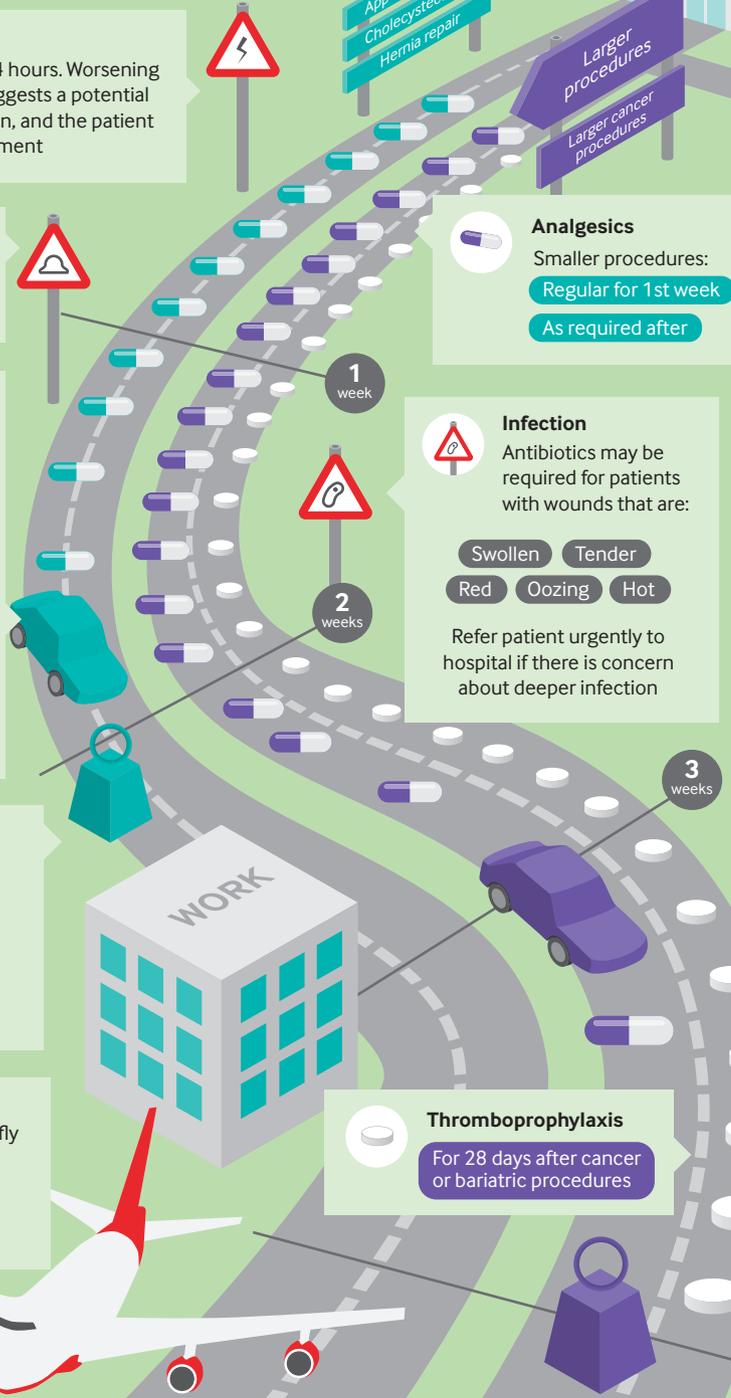
### Travel

Patients usually advised not to fly for 24 hours after laparoscopy, and to use thromboembolic stockings if flying within one month of surgery



### Thromboprophylaxis

For 28 days after cancer or bariatric procedures



Disclaimer: This infographic is not a validated clinical decision aid. This information is provided without any representations, conditions, or warranties that it is accurate or up to date. BMJ and its licensors assume no responsibility for any aspect of treatment administered with the aid of this information. Any reliance placed on this information is strictly at the user's own risk. For the full disclaimer wording see BMJ's terms and conditions: <http://www.bmj.com/company/legal-information/>

## POSTOPERATIVE RESTRICTIONS

Although the “port site” wounds suggest a modest intervention, the underlying procedure is usually more extensive, and patients need to remember that a period of recovery will be required. The speed at which normal activity is resumed after laparoscopic surgery largely depends on the extent and type of operation that has been performed. Explain to patients that they should notice an almost daily increase in the activities they are able to undertake without experiencing pain or discomfort.

**Driving** A patient undergoing laparoscopic cholecystectomy or appendicectomy might be able to drive after one to two weeks,<sup>16</sup> whereas those undergoing groin surgery or larger cancer procedures might need to wait longer. Patients should only be allowed to drive if they are comfortably able to apply an emergency brake, to look in their blind spot, and have sufficient reaction times.

**Return to work** There are no clear guidelines on when patients should return to work. The decision is personal, and depends on the person’s occupation and the procedure performed. Patients might only require two weeks away from work after smaller procedures (such as cholecystectomy or appendicectomy),<sup>18</sup> but a longer break or a gradual return to work might be advised after cancer surgery.<sup>18</sup>

**Heavy lifting** This is a controversial and under-researched topic. Some sources state that lifting should be avoided for six weeks,<sup>19</sup> but generally, one to two weeks’ avoidance of lifting are thought to be sufficient for smaller procedures, and four weeks for larger surgeries.<sup>18</sup> During this time, patients are advised not to lift anything heavier than a kettle or a shopping bag. They are also advised to avoid pushing and pulling activities, such as vacuuming, hanging up heavy washing, and mowing the lawn.

**Eating and drinking** For most patients, there are no restrictions. Operations for morbid obesity, anti-reflux procedures, and oesophago-gastric cancer might initially require patients to follow a liquid-only diet.<sup>20</sup>

**Travel** The Civil Aviation Authority advises patients not to fly for 24 hours after laparoscopy, because of the potential for expansion of retained carbon dioxide in the abdominal cavity.<sup>21</sup> A sensible precaution would be to use thromboembolic stockings if flying within a month of surgery.

## Complications commonly seen in primary care

After “minor” laparoscopic procedures (eg, cholecystectomy, hernia repair, or smaller gynaecological procedures), patients often feel “back to normal” quite quickly. They are often eager to mobilise (although they might feel tired more quickly than usual), and their appetite might be unaffected. It is important to bear these features in mind when assessing a patient after laparoscopic surgery, as a failure to improve (or a worsening of symptoms such as pain) might indicate an abdominal complication.<sup>22</sup>

### Pain

Mild pain is common following laparoscopic surgery. Often, the carbon dioxide used to inflate the abdomen can remain inside, causing cramps, bloating, and shoulder tip pain. These symptoms generally subside after 24 hours. If pain worsens after this period, consider the possibility of abdominal complications. Box 3 outlines the other symptoms and signs that might suggest an intra-abdominal complication.<sup>22</sup>

#### Box 3 | Symptoms and signs suggesting intra-abdominal complication after laparoscopic surgery

- Worsening abdominal pain
- Anorexia or reluctance to drink
- Reluctance to mobilise
- Nausea or vomiting
- Tachycardia
- Abdominal tenderness or distension
- Poor urine output
- Pyrexia

### Wound infection

Any wound that is red, oozing, hot, swollen, or tender might be infected, and might require antibiotic treatment. For a simple, superficial infection, select an antibiotic such as flucloxacillin that covers Gram positive bacteria, including beta-lactamase organisms such as *Staphylococcus aureus*. This can be prescribed and managed in the community. If there is a concern about deeper infection (and especially where prosthetic material, such as a mesh, was inserted during the laparoscopic procedure), urgently refer the patient to hospital for review by the surgical team.

### Distinguishing between haematoma, abscess, and seroma

These complications all cause swelling at the operative site, and have defining features that help to distinguish one from another (table). In cases of diagnostic doubt, ultrasound can be helpful. Seromas are often treated conservatively, while abscesses and (large) haematomas almost always require surgical intervention. Refer patients with worrying symptoms to a specialist for assessment on an urgent basis.

Distinguishing features of abscess, haematoma, and seroma

	Haematoma	Abscess	Seroma
Time of onset	Usually within 24-48 hours of surgery	Usually 3-7 days after surgery	Usually later onset (after a week)
Overlying skin colour	Bruising might be present	Red, might be oozing pus	Normal
Overlying skin temperature	Normal	Higher than normal	Normal
Degree of pain	Can be painful	Often exquisitely tender	Usually only slight discomfort

### Other postoperative complications

Laparoscopic surgery offers many advantages; however, abdominal complications can present more subtly than after a traditional “open” operation.<sup>22</sup> Pain might not be a predominant feature, and sometimes the only clinical sign is a slight tachycardia in otherwise normal observations. The complications themselves are almost identical, and largely depend upon the nature of the operation that has been performed. For example, division of adhesions confers the risk of bowel damage, cholecystectomy might result in leakage of bile into the peritoneal cavity, and leakage from staple lines or anastomoses can occur after surgical procedures for morbid obesity or gastrointestinal cancer surgery. The time frame in which the complication is identified and treated is most critical to its resolution. Where there is no clear evidence that the patient’s condition is improving, refer the patient to hospital urgently for further investigation. Imaging and blood tests should be performed quickly at the point of hospital admission, rather than in the community, which could delay treatment. Box 3 outlines the symptoms and signs that might raise suspicion of an intra-abdominal complication.

Competing interests: None declared.

Cite this as: *BMJ* 2018;360:k120

Find the full version with references at <http://dx.doi.org/10.1136/bmj.k120>

## GUIDELINES

# Oesophago-gastric cancer: summary of NICE guidance



May Oo Khin,<sup>1</sup> Nathan Bromham,<sup>1</sup> Mark Harrison,<sup>2</sup>  
Hilary Eadon,<sup>1</sup> on behalf of the Guideline Committee

<sup>1</sup>National Guideline Alliance, Royal College of Obstetricians and Gynaecologists, London

<sup>2</sup>Mount Vernon Cancer Centre, Northwood, Middlesex

Correspondence to: H Eadon HEadon@rcog.org.uk

Further information about the guidance, a list of members of the Guideline Committee, and the supporting evidence statements are in the full version on [bmj.com](http://bmj.com).

**Oesophago-gastric cancer is the fourth commonest cause of cancer death in the UK, with 16 000 new cases each year, and its incidence is rising.<sup>1</sup> Those affected by the disease often undergo a complex investigative pathway as a prelude to a variety of treatments with wide ranging short term and long term effects that require continued support throughout the initial period of care and beyond. Radical treatments for oesophago-gastric cancer are carried out in specialist centres where there will be access to a range of specialist healthcare professionals, but people with oesophago-gastric cancer will also require input from primary care and support of other professionals from various disciplines, such as cancer care dietitians and palliative care professionals.**

This article summarises the most recent recommendations from the National Institute for Health and Care Excellence (NICE) on diagnosis and management of oesophago-gastric cancer.<sup>2</sup> The guidance was developed with the aim of improving and standardising care in all disciplines that treat people with oesophago-gastric cancer, including specialist centres, but some of the recommendations will affect non-specialist services too, and these are highlighted and summarised below.

### HOW PATIENTS WERE INVOLVED IN THE CREATION OF THIS ARTICLE

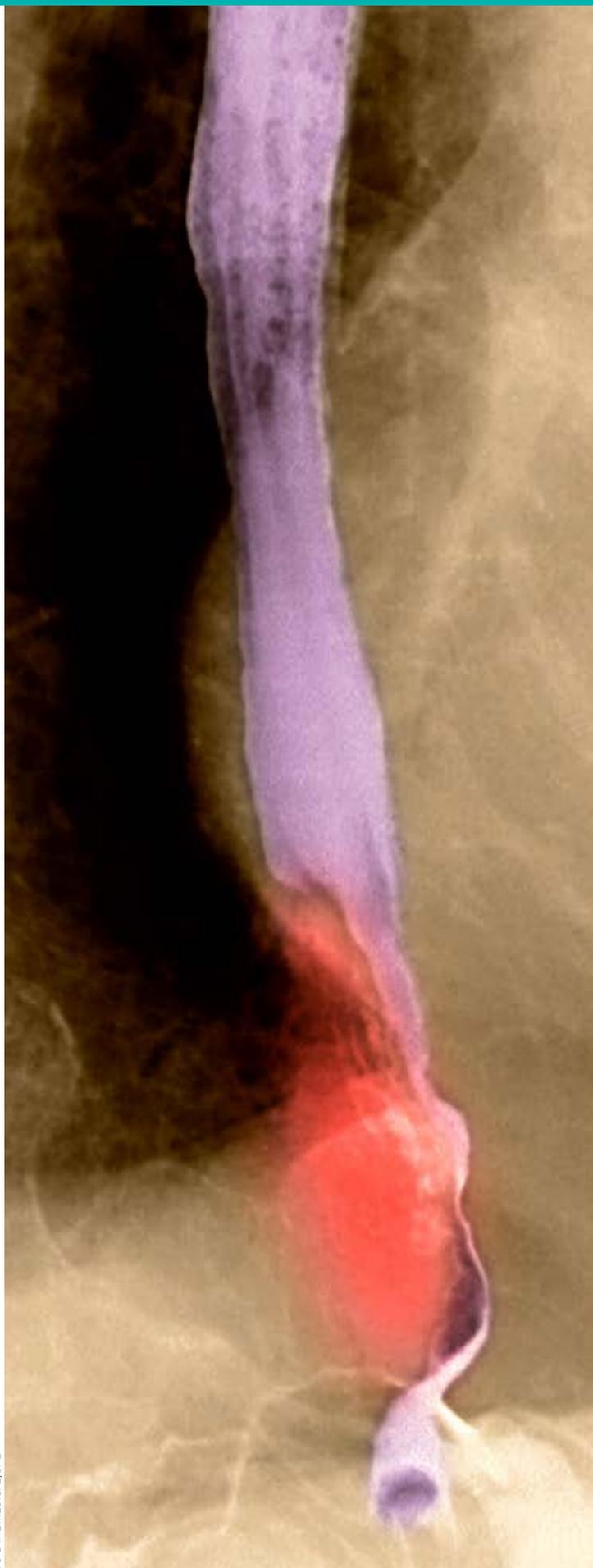


Committee members involved in this guideline included one patient member and one carer member with direct experience of oesophago-gastric cancer, who contributed to the formulation of the recommendations summarised on p 247.

### WHAT YOU NEED TO KNOW

- Nutritional support is an important part of management for people who receive treatment for oesophago-gastric cancer: tailor dietetic support to the person and their clinical situation
- Routine clinical follow-up or routine radiological surveillance is not normally offered for detection of recurrent disease: if a person with a history of oesophago-gastric cancer presents with symptoms, refer directly to specialist services with rapid access
- People with oesophago-gastric cancer benefit from psychosocial support, verbal and written information about their cancer and care, and other sources of advice including peer groups

DU CANE MEDICAL/SPL



## Recommendations

NICE recommendations are based on systematic reviews of best available evidence and explicit consideration of cost effectiveness. When minimal evidence is available, recommendations are based on the Guideline Committee's experience and opinion of what constitutes good practice. Evidence levels for the recommendations are in the full version of this article on [bmj.com](http://bmj.com).

### What the guideline covers

The overall guideline provides recommendations on:

- Information and support, both for people undergoing radical (that is, curative) treatment as well as those who are suitable only for palliative management (see further details below).
- Organisation of services—including the configuration of multidisciplinary teams and surgical services
  - Recommendations provide guidance on the composition and role of local and specialist multidisciplinary teams for people with oesophago-gastric cancer
  - The use of specialist surgeons and specialist surgical centres for curative resections is recommended.
- Staging investigations, including testing for the HER2 gene:
  - Guidance is provided on the use of positron emission tomography-computed tomography (PET-CT), endoscopic ultrasonography, and laparoscopy for the staging of both oesophageal and gastric cancer
  - HER2 testing is recommended in metastatic disease to allow appropriate use of the anticancer drug trastuzumab (which targets the HER2 receptor) in people whose cancer is HER2 positive.
- Treatment options for early and localised disease, including surgery, chemotherapy, and radiotherapy:
  - Guidance for surgical options and use of chemotherapy and chemoradiotherapy in early or localised disease, including gastric cancer and squamous cell carcinoma of the oesophagus
  - Guidance is provided on the best surgical approaches for oesophagectomy, and for the extent of lymph node dissection that should be carried out concurrently with oesophagectomy or gastrectomy.
- Palliative treatments for non-metastatic disease that is not suitable for surgery, or for locally advanced or metastatic oesophago-gastric cancer, include palliative chemotherapy, radiotherapy, stenting, and best supportive care.
- Nutritional support
  - Guidance is provided on the level and type of dietary support that should be provided to people with oesophago-gastric cancer (see below).
- Follow-up:
  - Recommendations provide advice on how and when patients who have had curative treatment should be followed up (see p 248).

## Information and support for people with confirmed oesophago-gastric cancers who are undergoing radical or palliative treatment

Much of the information and support for people with confirmed oesophago-gastric cancers will be provided by specialist teams, but general practitioners and other healthcare professionals can provide psychosocial support and assist in signposting to other sources of help—for example, local support groups for people with cancer, organisations such as Macmillan Cancer Support ([www.macmillan.org.uk](http://www.macmillan.org.uk)), or more specific organisations such as the Oesophageal Patients Association ([www.opa.org.uk](http://www.opa.org.uk)).

### For all people with oesophago-gastric cancer

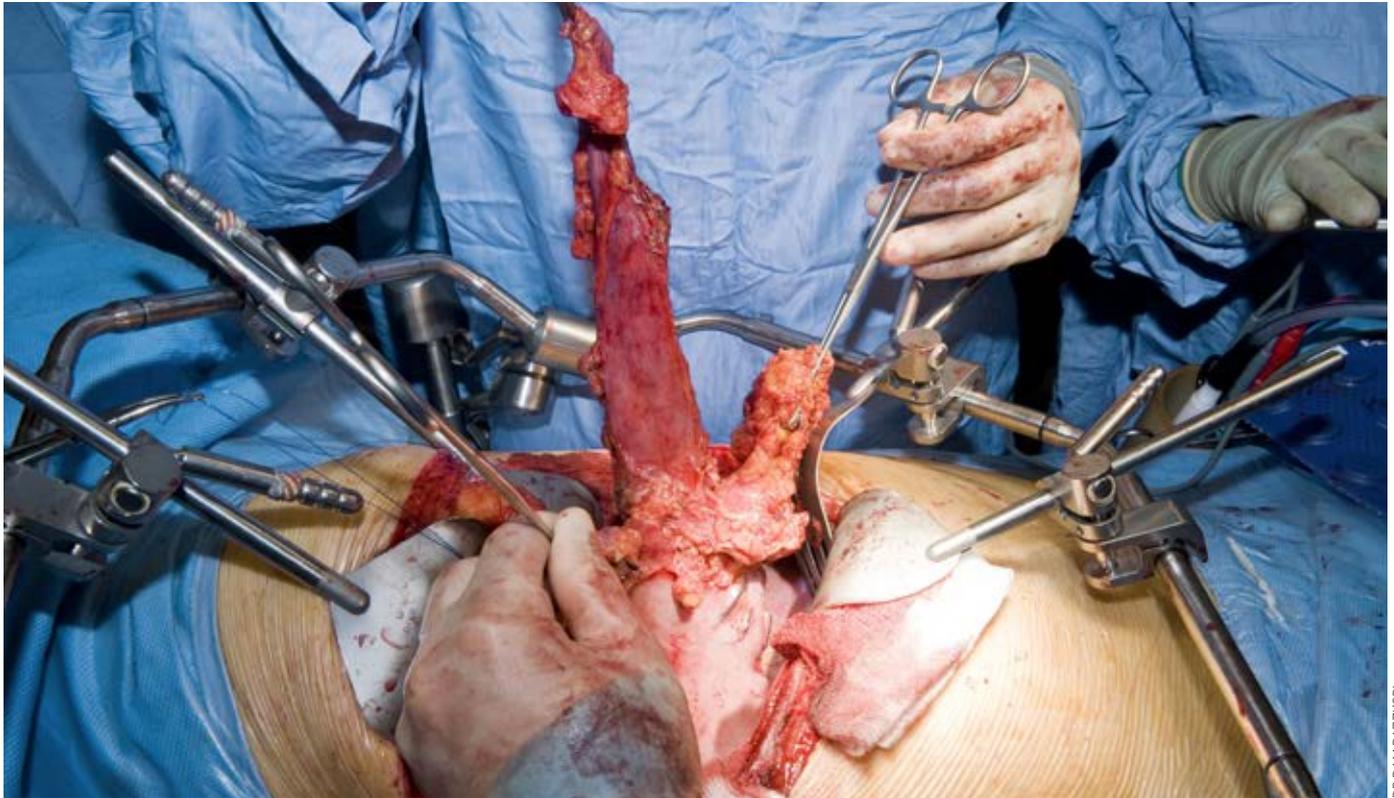
- Offer access to an oesophago-gastric clinical nurse specialist through the patient's multidisciplinary care team.
- Make sure each person with oesophago-gastric cancer has information in a format that is appropriate for them, to take away and review in their own time after you have spoken to them about their cancer and care.
- Inform people with oesophago-gastric cancer about peer-to-peer local or national support groups for them to join if they wish.
- Provide psychosocial support to the person with oesophago-gastric cancer and those important to them (as appropriate). Cover:
  - Potential impact on family life, changing roles, and relationships
  - Uncertainty about the disease course and prognosis
  - Concerns over heredity of cancer, recovery, and recurrence
  - Where they can get further support.

### For people receiving radical treatment

- Provide information about possible treatment options—such as surgery, radiotherapy, or chemotherapy—in all discussions with people with oesophago-gastric cancer who are going to have radical treatment. Make sure the information is consistent and covers:
  - Treatment outcomes (prognosis and future treatments)
  - Recovery, including the consequences of treatment and how to manage them
  - Nutrition and lifestyle changes.
- Follow the recommendations in NICE's guideline on patient experience in adult NHS services.<sup>3</sup>

### For people receiving palliative management

- For people who can only have palliative management, offer personalised information and support to them and the people who are important to them (as appropriate), at a pace that is suitable for them. This could include information on:
  - Life expectancy, if the person has said they would like to know about this
  - The treatment and care available, and how to access this both now and for future symptoms
  - Holistic issues (such as physical, emotional, social, financial, and spiritual issues) and how they can get support and help
  - Dietary changes and how to manage these and access specialist dietetic support
  - Which sources of information in the public domain give good advice about the issues listed above.
- Follow the recommendations in NICE's guideline on patient experience in adult NHS services.<sup>3</sup>
- Consider providing support from:
  - A specialist cancer care dietitian
  - A specialist palliative care team
  - A peer support group, if available.
- Follow the recommendations in the NICE guideline on improving supportive and palliative care for adults with cancer.<sup>4</sup>



DR P MARAZZI/SPL

**Which kind of nutritional support should be provided?**

People with oesophago-gastric cancer will receive specialist dietetic support but may also require support in the community, particularly if they are discharged home on enteral (or even parenteral) nutrition. This may include prescribing feeds, providing supplements, or nursing help with managing equipment. Additional advice to primary care teams has already been provided by NICE in its guideline on nutrition support for adults.<sup>5</sup>

*For people receiving radical treatment*

- Offer nutritional assessment and tailored specialist dietetic support to people with oesophago-gastric cancer before, during, and after radical treatments.
- Offer immediate enteral or parenteral nutrition after surgery to people who are having radical surgery for oesophageal and gastro-oesophageal junctional cancers.

*For people receiving palliative care*

- Consider support from a specialist cancer-specific dietitian for people with oesophago-gastric cancer receiving palliative care.

**GUIDELINES INTO PRACTICE**

- Do you have a local peer-to-peer cancer support group that people with oesophago-gastric cancer can join?
- What services in your area are there to provide nutritional support to people with cancer and how do you access them rapidly?
- Are you aware of the symptoms of recurrent oesophago-gastric cancer that would prompt you to refer people to specialist services?

- Together with members of the multidisciplinary team and the hospital and community palliative care teams, tailor dietetic support to the person with oesophago-gastric cancer and their clinical situation.
- Follow the recommendations in the NICE guidelines on improving supportive and palliative care for adults with cancer.<sup>4</sup>

**What assessments should be done at follow-up?**

People who have undergone successful curative treatment for oesophago-gastric cancer will not be routinely followed-up by specialist centres for the detection of recurrent disease, but will be provided with rapid access if symptoms return. Awareness of the symptoms that indicate recurrent disease is therefore important for non-specialists and healthcare professionals in the community, who can then facilitate access to specialist services.

- For people who have no symptoms or evidence of residual disease after treatment for oesophago-gastric cancer with curative intent:
  - Provide information about the symptoms of recurrent disease and what to do if these symptoms develop
  - Offer rapid access to the oesophago-gastric multidisciplinary team for review if symptoms develop.
- For people who have no symptoms or evidence of residual disease after treatment for oesophago-gastric cancer with curative intent, do not offer:
  - Routine clinical follow-up solely for the detection of recurrent disease
  - Routine radiological surveillance solely for the detection of recurrent disease.

Competing interests: See bmj.com.

Cite this as: *BMJ* 2018;360:k213

Find the full version with references at <http://dx.doi.org/10.1136/bmj.k213>



**Fig 1** | Skin fibrosis, induration, thickening, and scarring on the lateral aspect of the left leg



**Fig 2** | Fibrosis and scarring in the medial aspect of the left leg



**Fig 3** | Fibrosis and scarring extends to the left forearm. A surgical scar is also noted

**SPOT DIAGNOSIS**

**Skin changes after a magnetic resonance imaging scan**

A 54 year old woman with hepatitis C and end stage renal failure of unknown cause (for which she was receiving haemodialysis) had a magnetic resonance imaging scan with gadolinium in 2000. She experienced swelling and erythema of her limbs within 48 hours of the scan. This subsequently developed over months to diffuse aching pains, fibrosis with skin hardening and induration, and progressive weakness in all limbs, with substantial loss of muscle mass (figs 1 to 3). What is the clinical diagnosis?

Submitted by Barian Mohidin

Patient consent obtained.

Cite this as: *BMJ* 2018;360:k77

answers

**SPOT DIAGNOSIS** Skin changes after a magnetic resonance imaging scan

Nephrogenic systemic fibrosis is a very rare complication of gadolinium exposure in patients with end stage renal failure, and involves progressive symmetrical skin fibrosis with consequent thickening and induration. The mechanism is poorly understood, and although it was initially thought to affect only skin (hence the old name nephrogenic fibrosing dermopathy), it is now known to affect several visceral organs. There is histological evidence of muscle fibrosis with gadolinium deposition in the muscle itself, and the resultant contractures, stiffness, and chronic pain substantially impair mobility and contribute to muscle loss. Postmortem examinations have

identified characteristic fibrotic changes in multiple visceral organs, including the heart, lungs, and kidneys, and there is accumulating evidence that gadolinium also deposits in neural tissue. Fibrotic changes in the visceral organs can progress over time to result in failure of the affected organ. Cardiac involvement and renal failure account for mortality. This patient received a kidney transplant which eventually failed, and sequential transplant kidney biopsies showed worsening fibrosis over a period of years. Steroids, ultraviolet light therapy, plasma exchange, intravenous immunoglobulin, and renal transplantation have been tried, but there is currently no effective treatment for this condition.

**MINERVA IS OPEN FOR SUBMISSIONS.**

Minerva pictures are cases which offer an educational message, and are of interest to a general medical audience. They should be submitted as "Minerva" via our online editorial office (ScholarOne) and should follow our advice on submitting images. Please provide two or three sentences (no more than 100 words) explaining the picture, and send us the signed consent to publication from the

patient. We require written consent from every patient, parent, or next of kin, regardless of whether the patient can be identified or not from the picture.

For more information see <http://www.bmj.com/about-bmj/resources-authors/article-types>



You can record CPD points for reading any article. We suggest half an hour to read and reflect on each.

0.5 HOURS



Articles with a learning module logo have a linked BMJ Learning module at <http://learning.bmj.com>.

### Scrotal calcinosis

A 22 year old man presented with a six year history of scrotal nodules which had slowly progressed in number and size. He had no history of sexually transmitted disease, scrotal trauma, or previous surgery. Clinical examination revealed multiple, indolent, subcutaneous nodules, measuring 0.5-1.5 cm in diameter (figure). The results of laboratory evaluation, including serum calcium, phosphate, and parathyroid hormone levels, were unremarkable.

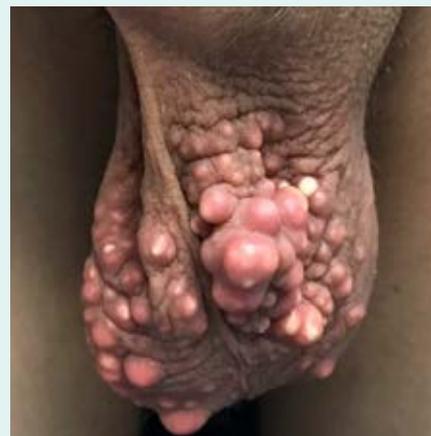
Based on these findings, a diagnosis of scrotal calcinosis was made. Idiopathic scrotal calcinosis is a rare and benign condition, predominantly affecting young men. The cause

of the condition is debated, but is likely related to the dystrophic calcification of pre-existent epidermal cysts. Surgical excision is considered the gold standard of treatment. In this case, all nodules were excised, with a good clinical and cosmetic outcome.

Alexander Kreuter (a.kreuter@derma.de), dermatologist, Bijan Koushk Jalali, dermatologist, Christian Tigges, dermatologist, Department of Dermatology, Venereology, and Allergology, HELIOS St Elisabeth Hospital Oberhausen, University Witten-Herdecke, Germany

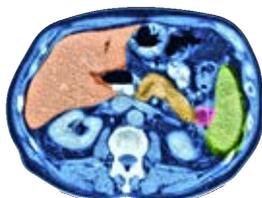
Patient consent obtained.

Cite this as: *BMJ* 2018;360:k65



### Trends in pancreatic cancer

The incidence of pancreatic cancer in most developed countries has been fairly stable over time. France might be an exception because a recent analysis of registry data reports a steep increase in incidence over the past 30 years (*Int J Epidemiol*). The investigators hope that this unusual pattern will provide clues to the underlying causes of pancreatic cancer. However, the first step must be to exclude the possibility that the increase is an artefact of gradual improvements in the completeness of registration.



### Long-term outcomes of caesarean delivery

As caesarean birth rates continue to rise worldwide, it's useful to have a systematic review of long term outcomes. The short version is that, compared with vaginal delivery, caesarean delivery roughly halves the chance of the mother later developing urinary incontinence and pelvic organ prolapse. On the other hand, there's a small increase in the risk of placenta previa, placenta accreta, miscarriage, ectopic pregnancy, and stillbirth in subsequent pregnancies. As far as the offspring are concerned, mode of delivery doesn't influence risk of atopy and allergy, but caesarean section seems to make inflammatory bowel disease less common (*PLOS Med*).

the start of the study, and follow-up was continued for many years after it ended. A recent analysis reports long-term but weak associations between high levels of D-dimer and a range of undesirable outcomes, which include all-cause mortality, cardiovascular mortality, cancer mortality, and mortality from conditions other than cancer and cardiovascular disease (*Circulation*).

### Age of childhood adversity and later psychiatric disorders

Children who experience physical abuse or sexual assault are twice as likely to develop mental illness as children who do not. It's reasonable to ask whether there are particular ages or stages of development when children are especially vulnerable, but a cross-sectional survey from the USA suggests not. Among 10000 adolescents aged 13 to 18, the age at which they first encountered maltreatment had little effect on the magnitude of the increased risk of psychiatric disorder (*Br J Psychiatry*).

Cite this as: *BMJ* 2018;360:k534



### Venous angioplasty of no benefit in MS

The hypothesis that anomalies of the internal jugular and azygos veins could lead to chronic cerebrospinal venous insufficiency and cause multiple sclerosis was always controversial. Although there were reports that patients improved neurologically after vascular intervention, the assessments were neither blinded nor controlled. A randomised controlled trial in more than 100 patients with relapsing-remitting multiple sclerosis and restricted venous outflow perhaps settles the matter (*JAMA Neurol*). Venous angioplasty produced no functional benefit and there was no reduction in the appearance of new brain lesions on magnetic resonance imaging.

### Coeliac disease in childhood

Children with chronic diseases tend to have more absences from school and to do less well academically than their healthy peers. However, a longitudinal study from Sweden finds no evidence that this generalisation applies to children with coeliac disease (*Arch Dis Child*). Several factors were associated with poorer school performance at ninth grade (14 to 15 years), including having been born small for gestational age, and living with a single parent, but a diagnosis of coeliac disease wasn't among them.

### D-dimer and health outcomes

D-dimer is a degradation product of cross-linked fibrin and a marker for hypercoagulability and thrombotic events. Participants in a large trial of pravastatin had their D-dimer levels measured at