

Abdominal masses

Symptoms of abdominal masses (presentation)

Abdominal masses are usually detected on physical examination rather than presented by the patient. Any patient with an unexplained abdominal mass should be referred for urgent specialist assessment.^[1]

Examination for abdominal masses

- Examine supraclavicular and inguinal nodes.
- Inspection - scars (especially around the umbilicus for laparoscopy scars), distension, prominent veins, local swelling, pulsation, visible peristalsis, skin lesions, asymmetrical movement at eye level. Exclude lesions of the abdominal wall: the patient raises their head (no good for the lateral abdomen); the patient does straight leg-raising (Carnett's method), 'blowing test' (Valsalva's test); the patient strains as if toileting (Kamath's test).^[2]
- Palpation - use warm hands, and examine the tender areas last. Light palpation, then deep. Check for guarding, rigidity and rebound tenderness. Determine for any mass: site, tenderness, size and shape, surface (irregular or smooth), edge (regular or irregular), consistency (soft or hard), mobility, whether pulsatile or ballotable.

Causes of Abdominal Mass by Location

<p>Right upper quadrant Cholecystitis - very tender mass. Cholangiocarcinoma - moderately tender, irregularly shaped mass. Hepatomegaly. Liver cancer - firm, lumpy mass.</p>	<p>Epigastric Hepatomegaly - firm, irregular mass (also in right costal margin). Pancreatic abscess or pseudocyst. Gastric carcinoma.</p>	<p>Left upper quadrant Splenomegaly. Gastric carcinoma. Pancreatic abscess or pseudocyst. Disorders of kidney and colon. Neurofibroma (rare).</p>
<p>Right flank Hydronephrosis - smooth spongy mass. Renal cell carcinoma (smooth, firm, non-tender mass).</p>	<p>Periumbilical Abdominal aortic aneurysm (pulsating mass). Tumour somewhere in the gastrointestinal tract.</p>	<p>Left flank Hydronephrosis (smooth spongy mass). Renal cell carcinoma (smooth, firm, non-tender mass).</p>
<p>Right iliac fossa Actinomycosis. Amoebic abscess. Appendix mass or abscess. Caecal/colon cancer or distension. Crohn's disease (multiple tender, sausage-shaped masses). Hernia. Ileocaecal mass caused by tuberculosis. Intussusception. Kidney abnormality. Ovarian tumour. Tumour in intra-abdominal testicle.</p>	<p>Suprapubic Distended bladder (firm mass can extend up to the umbilicus in extreme cases). Neuroblastoma (in children and infants). Uteropelvic junction obstruction.</p>	<p>Left iliac fossa Diverticulitis (abscess). Hernia. Kidney abnormality. Ovarian tumour. Colorectal cancer. Tumour in intra-abdominal testicle.</p>
	<p>Pelvis (should not be able to palpate below mass)</p>	

Ovarian cyst – smooth, round, rubbery mass. Ovarian tumour. Pregnancy. Uterine fibroids (round, lumpy mass) or malignancy.

The National Institute for Health and Care Excellence (NICE), in its guidance on suspected cancer recognition and referral, recommends: [1]

- **Ovarian cancer:** abdominal or pelvic mass identified by physical examination (which is not obviously uterine fibroids) in women aged 18 years and over: Refer women using a suspected cancer pathway referral. In addition, if ultrasound is ordered, the guidance confirms that if the ultrasound suggests ovarian cancer, an urgent referral should be made to a gynaecological cancer service.
- **Colorectal cancer:** abdominal mass: Offer quantitative faecal immunochemical testing.
- **Colorectal cancer:** rectal mass: Consider a suspected cancer pathway referral.
- **Non-Hodgkin's lymphoma:** splenomegaly (unexplained) in adults: Consider a suspected cancer pathway referral. When considering referral, take into account any associated symptoms, particularly fever, night sweats, shortness of breath, pruritus or weight loss. Separate recommendations have been made for adults and for children and young people to reflect that there are different referral pathways. In practice young people (aged 16 to 24) may be referred using either pathway depending on their age and local arrangements
- **Stomach cancer:** upper abdominal mass consistent with stomach cancer: Consider a suspected cancer pathway referral.
- **Gall bladder cancer:** upper abdominal mass consistent with an enlarged gall bladder: Consider an urgent direct access ultrasound scan (to be done within 2 weeks).

- **Liver cancer:** upper abdominal mass consistent with an enlarged liver: Consider an urgent direct access ultrasound scan (to be done within 2 weeks).
- **Leukaemia:** hepatosplenomegaly: Consider a very urgent full blood count (within 48 hours).
- **Neuroblastoma** or **Wilms' tumour:** abdominal mass (palpable) or enlarged abdominal organ (unexplained) in children: Consider very urgent referral (for an appointment within 48 hours) for specialist assessment.
- **Non-Hodgkin's lymphoma:** splenomegaly (unexplained) in children and young people: Consider a very urgent referral (for an appointment within 48 hours) for specialist assessment. When considering referral, take into account any associated symptoms, particularly fever, night sweats, shortness of breath, pruritus or weight loss.

Diagnosing abdominal masses (investigations)

Investigations will depend on the site and likely clinical diagnosis The following may be helpful:

- Early ultrasound or CT scan.
- Hollow organs may require the use of a contrast medium (eg, barium enema, gastrointestinal series, intravenous pyelogram).
- FBC with film, ESR, U&Es.
- LFTs.
- CXR and abdominal X-ray.
- Ultrasound or CT-guided fine-needle biopsy.
- Mantoux test.
- Paracentesis with fluid examination if ascites is present.
- Laparoscopy or laparotomy may ultimately be necessary to achieve a diagnosis.

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