**Site**

* **Anatomical location**
  + Usually expressed in terms of distance from a bony prominence (e.g. 2cm superior to the angle of the right mandible) or a well-demarcated site (e.g. left antecubital fossa)
* **Relationship to surrounding structures**
  + It may be possible to determine the anatomical plane from information given in the history or on examination (e.g. a subcutaneous lump lying superficial to a muscle will become more prominent when the underlying muscle is contracted, an intramuscular or submuscular lump will become less visible)

**Size**

* Size can be estimated but ideally should be measured using a tape measure or ruler
  + This ensures accuracy and allows objective assessment of any change in size
* Size should be stated in at least two dimensions (and three where possible)
  + For example “I palpated a 3 by 5 by 5cm mass…”

**Shape**

* The lump should be considered in three dimensions when describing its shape
* Descriptions should be made in geometrical terms where possible (e.g. spherical, oval, round etc.)
* [**Click here to learn how to describe rashes and more unusual shapes**](http://www.oxfordmedicaleducation.com/clinical-examinations/skin-examination/)

**Surface (appearance and colour)**

* **Appearance**
  + Is it smooth or rough; flat or raised; regular or irregular?
  + Is there any evidence of ulceration (skin breakdown) or necrosis (blackened, usually secondary to ischaemia)?
    - Normal skin often overlies deep lumps, while superficial swellings are more likely to result in a change in the overlying skin
* **Colour**
  + The lump may be the colour of the overlying skin or may appear red and inflamed
  + Certain lumps are abnormally pigmented (e.g. melanoma)

**Consistency**

* This clinical feature describes a spectrum between hard and soft and can be considered under three categories: **hard**, **firm (rubbery or spongy)** or**soft**
  + Hard lumps suggest the possibility of cancer
  + Fluid-filled lumps may be tense (and thus quite hard), rubbery or spongy
  + Soft lumps are more likely to be benign (e.g. lipoma)
* In terms of comparisons: hard is like your chin, firm is like your nose, soft is like your ear-lobe

**Pulsatility**

* Note whether the lump is pulsatile, suggesting a vascular origin
* Try to determine whether the pulsation originates from the lump itself or whether it is transmitted from a nearby vessel
* Intrinsic pulsation is indicated by a swelling that is pulsatile and expansile (e.g. an abdominal aortic aneurysm)

**Compressibility and reducibility**

* **Compressibility**
  + Lumps that can be emptied by pressure but reappear spontaneously on release of pressure are compressible (e.g. saphena varix or varicose veins)
* **Reducibility**
  + Lumps which disappear with pressure and do not return spontaneously (e.g. inguinal hernias) are reducible
* Before attempting to compress or reduce a lump be sure to ask the patient if the area is tender
* It is often helpful to ask the patient to demonstrate reducibility themselves (particularly true of hernias)

**Fluctuation**

* To test for fluctuation put your fingers on either side of the lump, opposite each other.  Press with one finger and feel whether the lump bounces against your other finger
* This indicates a fluid- or fat-filled lump
* If the lump is thought to contain fluid, this can sometimes be confirmed by eliciting a ‘**fluid thrill**’
  + Tapping a large fluid-filled swelling causes a pressure wave which can be felt on the other side of the lump

#### ****Mobility****

* Observe first whether the lump moves spontaneously, on respiration or with muscular contraction
  + Certain lumps have a characteristic mobility (e.g. fibroadenoma). The mobility of other swellings may vary depending on anatomic site and other factors
* Lesions that lie superficial to a muscle group should be tested for mobility with the underlying muscles both **relaxed** and **contracted**
  + If a previously mobile lump becomes fixed on contraction of the underlying muscles it is likely that the lesion has infiltrated the muscle layer
* Mobility can also be reduced by ‘skin tethering’, which reflects an inflammatory or neoplastic process (e.g. in breast cancer)
  + Tethering can be demonstrated by gently moving the lump in two planes, looking carefully for wrinkling or pulling of the skin

#### ****Transillumination****

* Using a pen torch, shine a light across the lump – ideally in a dark room
* A swelling containing clear fluid will glow when this test is performed, such as in:
  + Simple cyst
  + Hydrocele
  + Cystic hygroma
* It is important to note, however, that lipomas (fat-filled lumps) will also transilluminate

#### ****Percussion****

* Percussion is of limited value in assessing most lumps but may still provide important information
* Gas-filled swellings (such as any involving the bowel) are resonant to percussion, while dullness to percussion is a feature of fluid-filled lesions and solid structures (e.g. retrosternal thyroid mass)

#### ****Auscultation (bruits, murmurs & bowel sounds)****

* Auscultation may confirm findings in the preceding examination. Typical findings include bruits/murmurs over vascular lesions or areas with an abnormally increased blood supply (e.g. enlarged thyroid) and bowel sounds heard over an inguinal hernia

#### ****Extra points****

* Examination should be completed with a specific examination of the **lymph nodes** which drain the site of the lump, followed by a general assessment of the patient, with particular attention being paid to eliciting signs of systemic infection or malignancy
* Temperature, weight loss and lymphadenopathy are particularly relevant in this respect

## 

#### ****Complete the examination****

* Thank the patient after finishing the examination
* Make sure they are comfortable and happy getting dressed
* Clean your hands with alcohol gel
* In an exam hold your stethoscope behind your back, then turn to the examiner to present your findings…