Weight loss as a predictor of cancer

As primary care clinicians, unexplained weight loss can be a challenging symptom, especially if it occurs in isolation. It can be an indicator of cancer but also many non-cancer conditions. There are no national guidelines on how to manage isolated weight loss, and often no clear referral pathways, leaving us with uncertainty about how to manage and when or where to refer.

A recent BJGP meta-analysis examined the diagnostic value of weight loss, alone and in combination with other clinical features, as a predictor of cancer in primary care patients. It also examined how the predictive value of weight loss varies by cancer type, cancer stage, sex and age. There are some useful messages (BJGP 2018;68:44).

There are 2 groups of patients:

- Those with weight loss and one or more additional clinical feature which can point us in the right direction, e.g. change in bowel habit, abdominal pain.
- Those with isolated weight loss and no other pointers – these are trickier.

Results

- Unexplained weight loss in the primary care population is very specific for a future cancer diagnosis. If we code a patient as having unexplained weight loss, they **are** at higher risk of having cancer than patients without recorded weight loss.
- Unexplained weight loss is not very sensitive, so many patients presenting in primary care with an undiagnosed cancer will not have any weight loss *(so don't be reassured by its absence).*
- The PPV of cancer in patients with isolated unexplained weight loss aged >60y is:
  - 6.7% in women.
  - 14.2% in men.
- This clearly **exceeds the 3% risk threshold** for urgent investigation set out in NICE cancer guidelines.
- The 10 cancers associated with weight loss were prostate, colorectal, lung, gastro-oesophageal, pancreatic, non-Hodgkin's lymphoma, ovarian, multiple myeloma, renal tract and biliary tree.
- Across these cancer sites, sensitivity ranged from 2% to 47%, and specificity from 92% to 99%.
- The risk of cancer with weight loss increases:
  - When it presents alongside another clinical feature suggesting an individual cancer site.
  - With age.
- Weight loss was the second 'most-predictive' presenting feature associated with several different cancer diagnoses: colorectal, lung, myeloma, pancreatic and renal tract. It was the third-highest risk symptom for non-Hodgkin's lymphoma and gastro-oesophageal cancer.

How much weight loss is relevant?

The greater the amount of unexplained weight loss, the more likely a cancer diagnosis. However, this study was not able to give a specific cut-off that should either be worrying or indeed reassuring. Observational studies often use 5% of pre-morbid weight over 6–12 months as 'significant', but there is an absence of evidence to support this. There is a consensus view that in frail or slight individuals, smaller amounts of weight loss may be relevant.

In fact, in this study, it was the GP's inclination to code or record unintentional weight loss that was most predictive.

So, if you find yourself coding 'unexplained weight loss', that in itself is a big red flag because it probably also incorporates a more global assessment of the patient and your GP-Jedi skills!

What does this mean in practice?

This research shows that coordinated investigations across multiple body sites could speed up diagnosis of cancer in patients presenting with weight loss, and adds importance to the development of one-stop cancer diagnosis pathways for patients with alarm symptoms that don't fit disease-specific pathways easily. This is likely to be the most streamlined option for our patient.

They are being piloted in several parts of the country as part of the ACE programme, with multidisciplinary diagnostic centres being trialled in London, Manchester, Leeds, Airedale and Oxfordshire. Watch this space for one near you.

In the meantime, if you don't have access to these, make best use of your local pathways and direct access investigations – most of us can do a chest X-ray, PSA, FBC and CA125, and then call a consultant radiologist or speak to the general medical team/geriatricians.

	**Weight loss as a predictor of cancer in primary care** • Isolated unexplained weight loss is strongly predictive of a future cancer diagnosis, though many patients with cancer will not have weight loss. • Patients aged 60y or more presenting with unexplained weight loss should be urgently investigated. • Look for other clues to focus investigations. • If there are no other clues, if you have access, use a multidisciplinary diagnostic centre; if you don't, make best use of local pathways and direct access investigations.
	Do you have access to a multidisciplinary diagnostic centre? If not, what other pathways can you access locally? Search your practice records for coded entries of unexplained weight loss/weight loss unintentional in the past 12m – what were the clinical outcomes? Are there any patients age 60y or more who have not been investigated?