

# Benefit of PET or PET/CT in oesophageal cancer is not proven

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The patient-relevant benefit of positron emission tomography (PET) in oesophageal cancer, alone or in combination with computed tomography (CT), is not proven due to a lack of comparative studies. In terms of their diagnostic and prognostic accuracy, it also remains unclear whether these diagnostic techniques can detect the spreading of tumours better than conventional diagnostics. This is the conclusion of the final report of the German Institute for Quality and Efficiency in Health Care (IQWiG) published on 20 August 2013.

## More reliable diagnosis ought to improve treatment

About 4800 men and 1400 women are newly diagnosed with oesophageal cancer in Germany each year. The average age of disease onset is 65 years. The 5-year survival rate in Germany is at most 20%; this means that 5 years after [diagnosis](#), at best 20 of 100 affected patients are still alive.

Many experts assume that an examination using PET or PET/CT, alone or in combination with other methods, is better able to evaluate how far a tumour has spread (staging) and whether it has responded to treatment (restaging). In addition, better detection of tumour recurrence ought to be possible. The desired goal: the more exactly it is known how advanced the tumour is, the more precisely and successfully patients can be treated.

## **Benefit for patients crucial**

IQWiG therefore searched the international literature for studies that had examined the [consequences](#) of diagnostic interventions using PET or PET/CT with regard to whether they were accompanied by perceptible improvements for patients, for example, whether they increased their chances of survival or improved their [quality of life](#), or spared them unnecessary operations or further diagnostic interventions.

## **No direct comparative studies on benefit available**

However, the search for such direct comparative intervention studies was unsuccessful, so that the question regarding the patient-relevant benefit of PET or PET/CT in oesophageal cancer still remains to be answered.

IQWiG also searched for studies in which the diagnostic accuracy and prognostic power of PET or PET/CT was compared with other examination methods.

## **19 studies directly compared test accuracy of PET and CT**

A total of 48 studies were relevant for diagnostic and prognostic accuracy, of which most examined the accuracy of primary staging, that is, the classification of tumour stages before the start of treatment.

19 studies directly compared PET with CT. However, conclusions in favour of one or the two techniques cannot be drawn, as either no statistically significant difference was shown or the data could not be interpreted with sufficient certainty.

## Advantage of visualization of metabolic activity is unclear

Too few studies are so far available that directly compared PET or PET/CT with other [diagnostic techniques](#) and investigated treatment response (restaging) or diagnosis and prognosis of [tumour](#) recurrence. A reliable conclusion on the diagnostic and prognostic accuracy of PET or PET/CT in restaging or [recurrence](#) diagnostics is therefore not possible.

In particular the potential advantage of PET and PET/CT, which visualize metabolic activity, remains unclear versus morphologic imaging techniques such as CT or magnetic resonance imaging, which display anatomical structures.

Provided by Institute for Quality and Efficiency in Health Care

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