

# Role of PET-CT in Breast Cancer Staging: Audit of current practice

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## BACKGROUND

- While contrast enhanced CT is the modality of choice for breast cancer staging, in certain cases, RCR guidance advocates the use of fluorodeoxyglucose (FDG) positron emission tomography-computed tomography (PET-CT).
- We observed an increase in number of PET-CTs requested by the Breast Unit following RCR guidance<sup>1</sup> and change in local practice.

## AIM

- To audit PET-CT requests for breast cancer patients against the 2016 RCR guidelines<sup>1</sup>.
- To identify the added value of PET-CT over CT in this group.

## METHODS

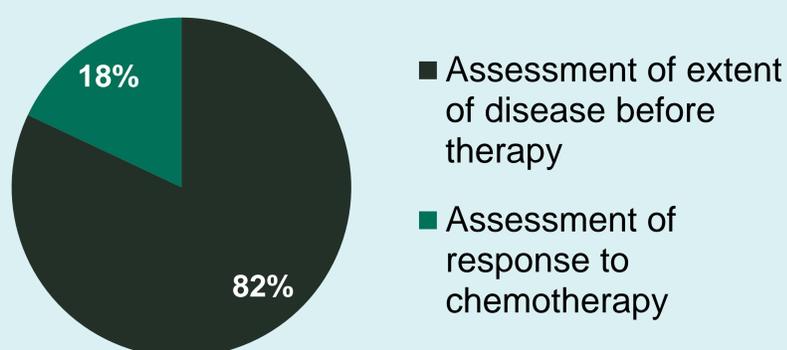
- Audit of PET-CT requests for breast cancer patients from July 2018 to July 2019.
- We recorded the indication for PET-CT, imaging findings and type of tumour.
- If patients had a CT within a few weeks, we compared the findings to determine the incremental detection rate of PET CT and whether this altered patient management.

## RESULTS

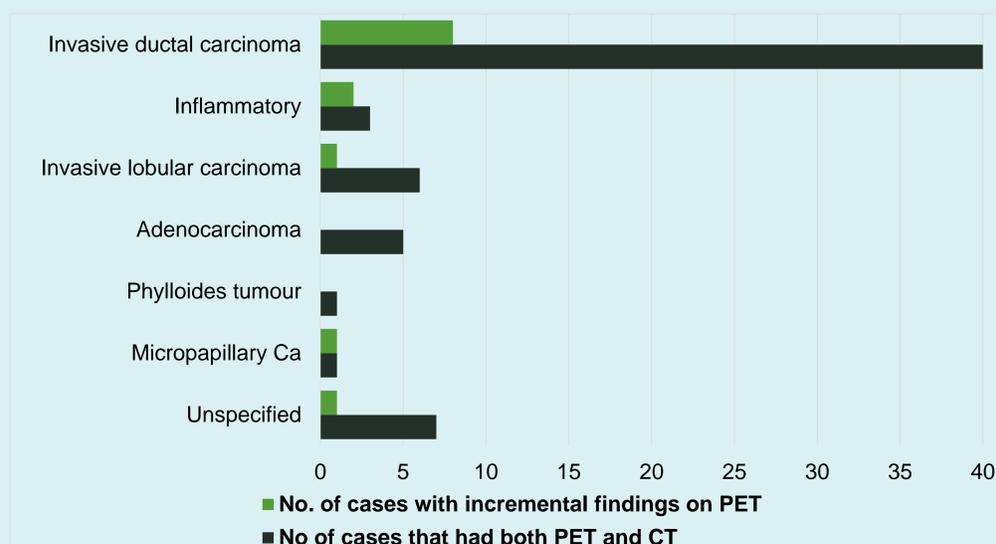
**100%** of the 84 audited PET-CT requests met RCR guidance

- The most common indication was to assess extent of disease followed by assessment of response to therapy.
- 63 PET-CT scans also had a CT within a few weeks and 11 of these (17%) showed differential findings which influenced patient management.
- Results were further analysed by type of tumour.

Indications for PET-CT as per RCR guidance.

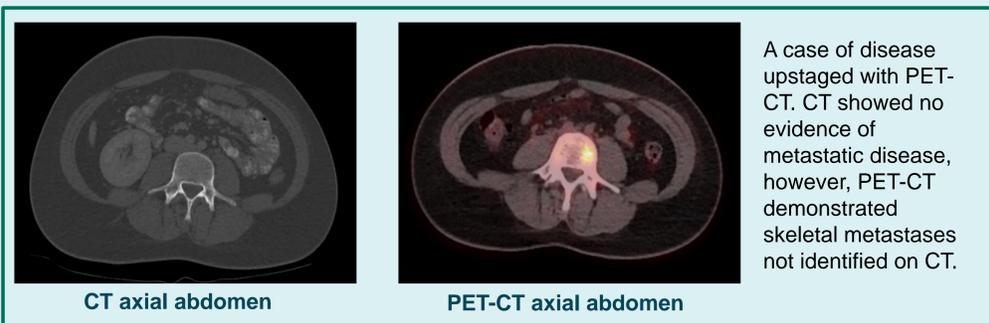
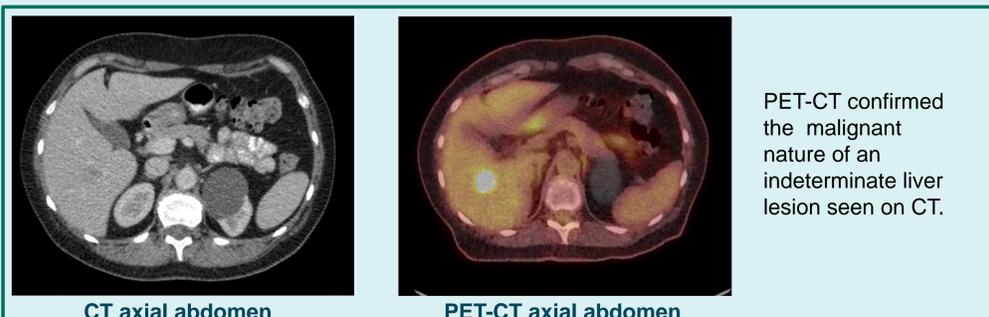


Proportion of scans for which PET-CT altered management, classified by cancer type.



## DISCUSSION

- PET-CT findings had a bearing on management in a significant proportion of scans, either by upstaging or clarifying indeterminate lesions, or occasionally downgrading the original CT diagnosis.
- When viewed by cancer type: 20% of scans with invasive ductal carcinoma, and 2 out of 3 (67%) scans with inflammatory cancer had extra findings.



- RCR guidance suggests PET-CT has an incremental detection rate of distant metastasis over CT of approximately 25% in inflammatory cancer and should be considered for this indication<sup>2</sup>. Our cohort is too small for significant correlation; further data is needed.

## CONCLUSION

- PET-CT provides added value over CT in certain cases.
- Our audit confirmed that all PET-CT requests at our centre met the RCR guidance.
- We identified a change in management in 17% of patients as a result of the PET-CT findings.