FDG-PET Predictivity Of Pathological Axillary Nodal Status In Carcinoma Breast-Upfront And Post NACT Setting.

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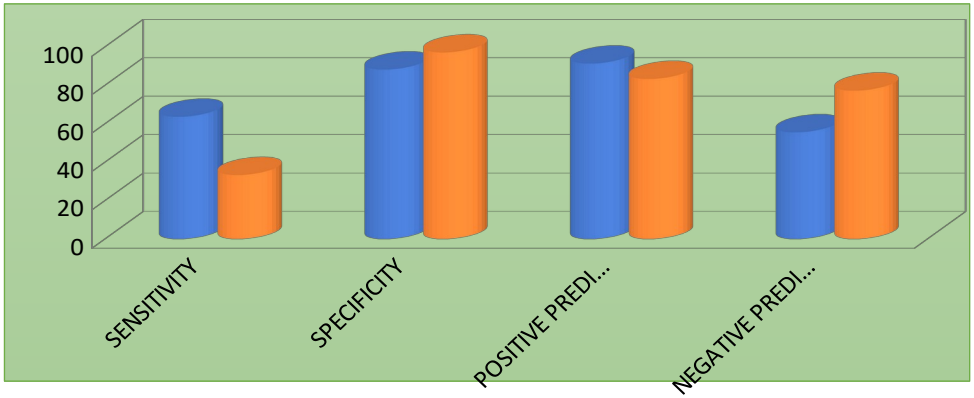
OBJECTIVE

FDG PET is used in staging, ealy prediction of treatment response,monitoring metastatic tumous and in disease status assessment post completion of treatment.In patients undergoing upfront surgery ,a significant standardized uptake value(SUV) is associated with pathological node positivity.In patients receiving anterior chemotherapy,studies have shown that a reduction in size and SUV of primary tumour or involved node predicts response to therapy.However based on our observation,the predictive value of PETCT appeared to differ between the upfront setting and post neoadjuvant chemotherapy (NACT) setting.Our study compares the sensitivity,seificity,positive predictive value(PPV) and negative predictive value (NPV) of FDG-PET in predicting pathological axillary nodal involvement in 50 upfront surgery and 50 post NACT patients.

MATERIIAL AND METHOD

This study was conducted between the year 2015 to 2016.Clinical,histopathological and radiological details were obtained from patien records. 50 upfront surgery and 50 post NACT patient details were reviewed for PETCT nodal status and histopathological nodal status and the following parametres analysed.



	UPFRONT SURGERY	POST NACT
Sensitivity	63.6%	33.3%
Specificity	88.2%	97.1%
Positive Predictive Value	91.3%	83.3%
Negative Predictive Value	55.5%	77.2%

RESULT

Among the 10 patients with negative PET node but positive pathological node , 7 had no SUV uptake and 3 had less than 2.5 SUV uptake.Among the 12 patients with negative PET node but positive pathological node , 3 had no SUV uptake and 9 had less than 2.5 SUV uptake.All 9 patients with insignificant SUV but pathological node positivity had insignificant CT size of node,that is short axis less than 1cm, which could be the reason for low SUV uptake despite node positivity.

CONCLUSION

Although metabolic response monitoring post chemotherapy is a useful tool,the sensitivity appears to be lower than upfront PETCT setting in predicting pathological node positivity.That is,the proportion of patient with positive pathological node having PET positivity appears to be lower.A practical application of the same would be , to complete all cycles of chemotherapy prior to surgery, irrespective of an interim petct complete nodal response to attain maximal Pathological Complete Response rates.To conclude, the rate of PETCT predictivity of pathological axillary nodal positivity appears to differ between upfront surgery and post NACT setting.

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