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Title: Outcomes of NSCLC patients with positive EGFR mutation

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Body: Background: Tyrosine kinase inhibitors (TKIs) have been shown to offer an increased progression-free survival and response rate in non small cell lung cancer (NSCLC) patients with epidermal growth factor receptor (EGFR) activating mutations. Screening is recommended in patients with advanced NSCLC, particularly in those with adenocarcinoma. Aims: To evaluate the outcomes of NSCLC patients who underwent EGFR mutation testing. Methods: Retrospective of 135 patients between Jan 2010 and Dec 2011. Results: Of the 135 patients, 13(10%) had positive EGFR mutation. Further information was not available for 1 and hence excluded from analysis. 9 had stage IV, 2 had stage IIIb and 1 had stage IIa. All had adenocarcinoma except 1, adenosquamous. Performance status (n=11), median (IQR), 2(1-2). Of the 12 patients with positive mutation, 8 received TKIs; mean duration of treatment was 7 months (SD 4). 1 had an insertion in exon 20 usually regarded as resistant to TKI. 1 had palliative chemotherapy and 1 had metastatic brain lesion resected with palliative radiotherapy prior to receiving TKI. Median survival was 10 months in those who received TKIs and 7 in those who did not; there was no survival difference in both groups (p=0.785, 95% CI 0.23-6.74).

Conclusion: Most of our patients had advanced disease and despite the use of TKIs in selected patients the prognosis remained poor. Common mutations were deletions in exon 19 and point mutations in exon 21.