Diagnostic -therapeutic pathway (DTP) of early-stage non-small-cell lung cancer (eNSCLC): a real-world focus on EGFR status detection in resected patients (pts)

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Abstract

The phase III ADDURA trial showed a prolongation of median relapse free survival (mRFS) of EGFR-mutant (mut) eNSCLC pts receiving osimertinib as adjuvant (adj) treatment (trt). Currently, REFLEX EGFR test on surgical specimens is not widely performed across Italian Centres, though may impact on therapeutic chances and outcome.

Methods

This is an observational study enrolling chemo-naïve stage I-III lung adenocarcinomas referred to our Unit between January 2017 and October 2018. The DTP was measured through specific indicators defined by the DTP regional document; a final cost evaluation for cancer care in this setting was depicted through administrative data flows (ADF) from anonymized pts.

Results

Data from 144 resected pts are reported: 84 (58.3%) were males, 25 (17.4%) never-smokers. Pre-surgery diagnostic biopsy (bio) was performed in 60 (45.8%) and EGFR REFLEX test in 39 (88.6%) pts out of 44 done at our center. Most pts underwent lobectomy (79%) plus lymphadenectomy. Pathological stage was I in 59.0%, II in 18.9%, IIIA in 15.3% and IIIB in 6.9% of pts. On surgical specimens, REFLEX test was performed in 118 (81.9%) pts; detection methods were RT-PCR (15.3%), Sanger sequencing (37.3%) and mass spectrometry (47.5%). Median time to EGFR report from pathology unit registration was 20 days (range 11-95) and 21 days (9-67), for bio samples and specimens respectively. 28 (19.4%) pts were EGFR-mut. Among pts with available follow-up data, 9.7% received adj trt. At data cut-off (9th April 2021), mRFS has not been reached. Among relapsed pts (N=33, 22.9%), 5 (15.2%) were EGFR-mut; a consequence analysis from ADF showed a medium cost of € 34,340.4 (28,423.2-40,257.5) for the whole management of eNSCLC pts undergoing radical surgery. Costs of RT-PCR and Sanger sequencing was € 544,55 and 814,70 per pts according to reimbursement rates established by the Veneto Regional Authority.

Conclusions

EGFR REFLEX test in eNSCLC pts is feasible in terms of timing and costs and allows the selection of pts that could benefit from the upcoming osimertinib adj trt.

Contacts and Disclosure

Authors of this poster have no conflict of interest to declare.