TARGET THERAPY IN NON-SMALL CELL LUNG CANCER (NSCLC): A RETROSPECTIVE ANALYSIS TO GUARANTEE THE APPROPRIATENESS OF THE PRESCRIPTIONS IN OUR HOSPITAL

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BACKGROUND & IMPORTANCE

During past years several targeted therapies have been approved for various mutations in non-small cell lung cancer (NSCLC). Targeted therapy has been shown to be effective in several metastatic cancers with specific gene mutations or molecular biomarkers, and sophisticated molecular diagnostics allow greater personalized treatment selection to prevent treatment failure, avoid unnecessary treatment, and improve survival.

AIM & OBJECTIVES

The aim of this retrospective analysis is to verify that in the actual clinical practice of our hospital targeted therapy prescriptions and deliveries for patients diagnosed with NSCLC metastatic match with a proper molecular diagnostic testing (human DNA/RNA analysis).

MATERIALS & METHODS

The oncology pharmacist cross data regarding patients' gene mutations and anti-cancer oral therapy's deliveries to patients. Data sources are Pathology department software that include mutations tested with a real-time PCR fully automated and pharmacy ERP software that include for each patient who received an oncologic therapy the name of the therapy, the number of confections, the date of delivery.

RESULTS

Fig.1 Adenocarcinoma

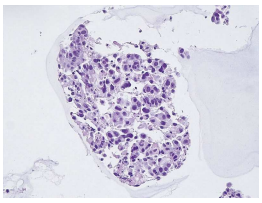
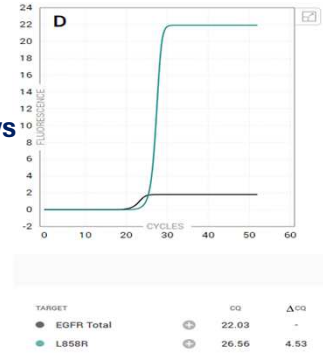


Fig.2 real-time PCR graph that shows L858R- EGFR mutation



Data period: April 2020 - August 2022

TARGET THERAPY	N° PATIENTS	EGFR	ALK	ROS	BRAF V600
osimertinib	17	deletion of exon 19			
osimertinib	1	T790M resistance			
osimertinib	6	L858R			
osimertinib	1	G719S			
osimertinib	28	positivo *			
alectinib	5		positivo		
alectinib	11		positivo *		
gefitinb	3				
afatinib	2	positivo *			
afatinib	6	positivo *			
trametinib + dabrafenib	3				positivo *
entrectinib	1			positivo *	
crizotinib	1		positivo *		
erlotinib	2	positivo *			

positivo*: patient transferred from another center

CONCLUSION & RELEVANCE:

This retrospective analysis of real-world data among patients with non-small cell lung cancer has found that targeted therapies prescribed in our hospital are connected to an oncogene mutation. Next step is to develop an IT integration between departments' software in order to allow to the oncology pharmacist to check the fully appropriateness of prescription before delivery.

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