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DPYD SNPs AND DISEASEE FREE SURVIVAL AFTER CAPECITABINE-BASED ADJUVANT TREATMENT

García-González X[1], Pellicer M[1], García MI[1], García-Alfonso P[2], Grávalos C[3], Pachón V[4], Martinez V[5], Martinez-Ortega P[1], Sanjurjo M[1], López-Fernández L[1].

[1] Pharmacy Department. Hospital General Universitario Gregorio Marañón. Instituto de Investigación Sanitaria Gregorio Marañón IiSGM. Madrid, Spain.
[2] Oncology Department. Hospital General Universitario Gregorio Marañón. Instituto de Investigación Sanitaria Gregorio Marañón IiSGM. Madrid, Spain.
3 Oncology Department .Hospital Universitario Doce de Octubre. Instituto de Investigación Sanitaria Hospital Doce de Octubre. Madrid, Spain.
[4] Oncology Department. Hospital Universitario Ramón y Cajal. Instituto Ramón y Cajal de Investigación Sanitaria. Madrid, Spain.
[5] Oncology Department. Hospital Universitario La Paz. Instituto de Investigación Hospital Universitario La Paz. Madrid, Spain.

OBJECTIVES

Background: *DPYD* has a key role in fluoropyrimidines metabolism. The role of its genetic variants in drug efficacy and toxicity has been widely studied, often with conflictive results. More information is needed.

PURPOSE:
To analyse if Single Nucleotide Polymorphisms (SNPs) in DPYD exon regions have an influence in Disease Free Survival (DFS) in colorectal cancer (CRC) patients treated with capecitabine-based adjuvant chemotherapy.

METHODS

STUDY DESIGN:
- Observational, ambispective.
- Multicentical: 4 hospitals.
- N=138.
- Median follow-up time: 30.1 months

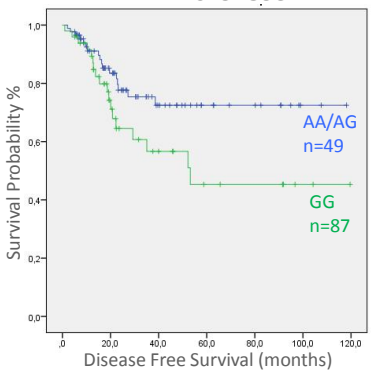
INCLUSION CRITERIA:
- Age ≥18 years.
- Stage II/III CCR.
- Capecitabine-based adjuvant chemotherapy.
- ECOG PS ≤ 2.
- No renal/hepatic damage.

GENOTYPING:
OpenArray™ technology.
7 SNPs in DPYD exon regions:
- rs12119882
- rs1801158
- rs1801159
- rs291592
- rs291593
- rs44221623
- rs6668296

RESULTS

Patient characteristics		
Median age (years)	67	(29-81)
Sex n (%)		
Male	69	(50)
Female	69	(50)
Hospital		
Doce de Octubre	67	(48.6)
Gregorio Marañón	56	(40.6)
La Paz	12	(8.7)
Ramón y Cajal	3	(2.2)
Tumour stage n (%)		
II	40	(28.9)
III	99	(71.1)
Type of cancer n (%)		
Colon	104	(75.4)
Rectum	34	(24.6)
Treatment n (%)		
Capecitabine + oxaliplatine (XELOX regime)	106	(76.8)
Capecitabine monotherapy	32	(23.2)

***DPYD* rs291593**



***DPYD* rs291593**

12-month DFS:
- AA/AG=91.6%
- GG=89.6%

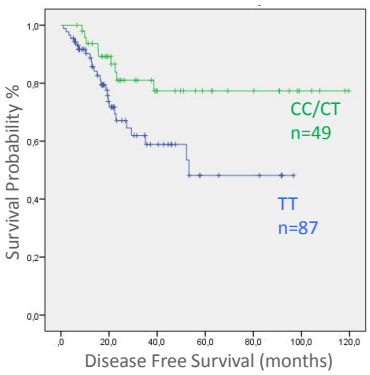
HR=2.15 IC 95%(1.1-4.23)
p=0.026

***DPYD* 1801159**

12-month DFS:
- CC/CT=93.7%
- TT=88.7%

HR=2.16 IC 95%(1-4.67)
p=0.051

***DPYD* rs1801159**



CONCLUSIONS

•Genotyping of exonic variants in *DPYD* could be a successful approach to find new pharmacogenetic predictors of tumour relapse in CRC patients.

•This are preliminary results that need to be validated in bigger cohorts with longer follow-up.

xandra.garcia@salud.madrid.org

www.madrid.org/hospitalgregoriomaranon/farmacia **@farma_gregorio**