Conclusions

- Foscarnet is an effective alternative in the treatment of CMV infection if there is intolerance or lack of response to ganciclovir.
- Worsening renal function is the most important adverse effect.

No conflict of interest.

DGI-066 SURVIVAL STUDY OF PATIENTS WITH NON-SMALL CELL LUNG CANCER TREATED WITH ERLOTINIB

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Background Lung cancer is the most common malignancy in the world, with approximately 1.4 million new cases per year, representing 16.6% of all tumours in men and 7.5% in women. It is the leading cause of cancer death.

According to the European Medicines Agency erlotinib is indicated in non-small cell lung cancer.

Erlotinib is a cytostatic selective inhibitor of tyrosine kinase coupled to EGFR.

Purpose To determine the survival of patients with stage IV non-small cell lung cancer (NSCLC) treated with erlotinib.

Materials and Methods Retrospective cohort study of all patients treated with erlotinib from 1 January 2011 to 15 June 2012 in a regional tertiary level hospital. Data collection: Viewed outpatient dispensing programme (Cafydim), reviewed medical records.

Statistical analysis:

1. Kaplan-Meier method: to determine the probability of global survival.
2. Logrank method: to compare the survival distributions of two samples.

Variables investigated: death, treatment time, treatment line and treatment discontinuation, Epidermal Growth Factor Receptor (EGFR) mutation (positive or negative).

Results Fifty patients were included. Thirty of them died. The average survival of the patients was 244.9 days with an IC95% [195.3–294.5]. 50% of the patients were alive at 180 days with IC95% [104.9–255.1].

The probability of remaining alive at the end of the study for patients with first-line treatment was 6.7% vs. 45% with the second or third line.

Survival as a function of treatment dropout: no patients who discontinued treatment during the study lived longer than if they continued treatment (8.7% vs. 18.8%).

No determinations of EGFR mutation were made.

Conclusions Erolitinib is emerging as an effective drug that increases survival in patients with NSCLC if it is administered as second or third line vs. first line.

It is necessary to determine EGFR mutations to prevent drugs being administered to patients with negative mutations.

No conflict of interest.

DGI-067 TELAPREVIR, A NEW PROTEASE INHIBITOR FOR TREATMENT OF HEPATITIS C VIRUS

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Background Hepatitis C virus (HCV) infection is a major health problem in the western world. Current treatment with interferon (IFN) and ribavirin (RBV) is able to produce a sustained virological response in approximately 50% of patients with genotype-1. Telaprevir (TPV) represents a change in the treatment of HCV.

Purpose To describe the proportion of patients who had undetectable plasma HCV-RNA at week 4 and 12 of treatment, the haemoglobin and platelets level during treatment and the most frequently reported adverse events.

Materials and Methods We conducted a retrospective study of all patients who started triple therapy in 2012. We collected demographics (age and sex), genotype, pre-treatment response, haemoglobin, platelets, plasma HCV-RNA at weeks 0, 4 and 12 and reported adverse events.

Results Since January 2012, 9 patients began treatment with RBV+IFN+TPV with a mean of age of 49 (SD:6.2). 89% were male. Genotype-1a was predominant (95%).

Five patients were previous non-responders, three were relapsers and one was missing.

The mean haemoglobin at weeks 0, 4 and 12 was 15.5 (SD:1.2), 13.0 (SD:1.7), and 11.3.(SD:1.9) mg/dl respectively and the mean platelets at week 0, 4 and 12 were 217 (SD:142.4), 132 (SD:46.2) and 121 (SD:33.9) respectively. The mean of plasma HCV-RNA at the beginning was log 6.55 (SD:0.39). At week 4, 8 patients (88.9%) had undetectable plasma HCV-RNA and 1 had to discontinue treatment (HCV-RNA: log5.63). At week 12, 7 patients had undetectable plasma HCV-RNA. One patient had to discontinue treatment due to severe anaemia.

The most frequent adverse event was anaemia (89%); in two cases it was even necessary to administer erythropoietin. Other adverse events were rash, fatigue and haemorrhoids.

Conclusions Our rate of undetectable plasma HCV-RNA at week 4 is high (89%) which allowed TPV to be suspended at week 12 and RBV+IFN treatment to be shortened to 24 weeks.

Anaemia was the major serious adverse event reported.

No conflict of interest.

DGI-068 THE EFFECT OF MAIN GENE POLYMORPHISMS ON STABLE DOSES OF ACENOCOUMAROL IN LONG-TERM ANTICOAGULATION TREATMENT

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Background Several variants in CYP2C9 (CYP2C9*2 and especially the CYP2C9*3 allele) and VKORC1 genes (especially the 1639G>A polymorphism) are associated with effective coumarin derivative dose. The rs2108622 polymorphism in the gene encoding cytochrome P450, family 4, subfamily F, polypeptide 2 (CYP4F2) could also influence warfarin dose with relevant effects on coumarin response. Concomitant drugs metabolised by CYP450, such as proton pump inhibitors, mainly metabolised by CYP2C19, may increase the risk of overanticoagulation in long-term oral anticoagulation therapy. Acenocoumarol pharmacokinetics may result altered with the presence of the C3435T gene polymorphism in the P-glycoprotein and has been associated to higher warfarin dose requirements in patients with deep vein thrombosis.

Purpose Our aim was to evaluate the influence of VKORC1, CYP2C9-(CYP2C9*2 and CYP2C9*3 alleles), CYP4F2*2, CYP2C19*17 and MDR1-C3435T gene polymorphisms on the achievement of stable anticoagulation dose in patients treated with acenocoumarol.

Materials and Methods Patients with atrial fibrillation, pulmonary embolism, deep vein thrombosis, metallic aortic valve and metallic mitral valve prosthesis treated with acenocoumarol at a third level hospital were genotyped by Polymerase Chain Reaction (PCR)-Restriction Fragment Length Polymorphism, direct sequencing or real time PCR. Clinical, pharmacological and socio-demographic

parameters were analysed during 6 months of follow-up after starting anticoagulation therapy with acenocoumarol.

Results One hundred and eighteen patients (mean age: 73 ± 12 years; 55.7% male) treated with acenocoumarol therapy and monitored for dose adjustment were recruited.

The frequency of different genotypes according to stable anticoagulation status is shown in Table 1. Table 2 shows the frequency of genotypes in stable anticoagulated patients classified by stable anticoagulation dose (High: >28 mg/week; Intermediate: 7–28 mg/week; Low dose: <7 mg/week).

The stable anticoagulation status was not associated to any gene polymorphism, and the stable anticoagulation dose was only associated to CYP2C9*3 (0.047).

Conclusions The achievement of a stable anticoagulation status is not associated to VKORC1, CYP2C9*2, CYP4F2*2, CYP2C19*17 or MDR1-C3435T gene polymorphisms, although the stable anticoagulation dose is associated to CYP2C9*3.

Abstract DGI-68 Table 1 The frequency of different genotypes according to stable anticoagulation status

			Stable		Total	p-value
Gene polymorphism	**Genotype**	**n**	**No**	**Yes**		
VKORC1*2 (rs9923231)	CC	44	30	14	115	0.758
	CT	57	40	17		
	TT	14	11	3		
CYP2C9*2 (rs1799853)	CC (WT)	82	61	21	117	0.223
	CT	33	20	13		
	TT	2	2	0		
CYP2C9*3 (rs1057910)	AA (WT)	98	69	29	116	0.724
	AC	18	14	4		
CYP4F2*3 (rs2108622)	CC (WT)	53	38	15	117	0.352
	CT	50	33	17		
	TT	14	12	2		
CYP2C19*17 (rs12248560)	GG (WT)	85	59	26	113	0.729
	GA	27	20	7		
	AA	1	1	0		
ABCB1 C3435T (rs1045642)	CC (WT)	31	22	9	118	0.864
	CT	56	41	15		
	TT	31	21	10		

VKORC1: Vitamin k epoxide reductase complex,subunit 1; CYP2C9*2: Cytochrome P450 family 2, subfamily C,polypeptide 9, allele variant:2; CYP2C9*3 Cytochrome P450 family 2, subfamily C,polypeptide 9, allele variant: 3; CYP4F2: cytochrome P450, family 4, subfamily F, polypeptide 2; CYP2C19 Cytochrome P450 family 2 subfamily C,polypeptide1 9;ABCB1: ATP-binding cassette, subfamily B, member 1.

Abstract DGI-068 Table 2 The frequency of genotypes in stable anticoagulated patients classified by stable anticoagulation dose

Gene polymorphism	**Genotype**	**Stable**	**Low dose**	**Intermediate dose**	**High dose**	**p-value**
VKORC1*2 (rs9923231)	CC	13	0	13	1	0.280
	CT	17	1	15	1	
	TT	3	1	2	0	
CYP2C9*2 (rs1799853)	CC (WT)	21	1	18	2	0.498
	CT	13	1	12	0	
CYP2C9*3 (rs1057910)	AA (WT)	29	1	27	1	0.047
	AC	4	1	2	1	
CYP4F2*3 (rs2108622)	CC (WT)	15	1	14	0	0.685
	CT	17	1	14	2	
	TT	2	0	2	0	
CYP2C19*17 (rs12248560)	GG (WT)	26	2	22	2	0.542
	GA	7	0	7	0	
ABCB1 C3435T (rs1045642)	CC (WT)	9	1	8	0	0.430
	CT	15	1	12	2	
	TT	10	0	10	0	

(High dose: >28 mg/week; Intermediate dose: 7–28 mg/week; Low dose: <7 mg/week)

No conflict of interest.

DGI-069 THE IMPORTANCE OF CLINICAL PHARMACIST COUNSELLING IN IMPROVING PATIENT MEDICATION ADHERENCE

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Background Adherence is a key factor in achieving good clinical outcomes in patients undergoing long-term treatment. Meeting with patients is fundamental in educating them on correct drug use, and recommending dietary and lifestyle changes.

Purpose To assess the clinical pharmacist (CP) counselling programme, up to the discharge and outpatient visits, to improve medicines adherence, reduce adverse drug events, and encourage positive behaviour.

Materials and Methods CP counselling was addressed to adult abdominal and cardiac surgery patients, including transplanted patients. The topics discussed were: importance of prescribed drugs and therapeutic indications, directions, and potential side effects. A drug information sheet was given to all patients. A survey was then conducted by the ISMETT Pharmacy Service from 1 May to 30 September 2012.

Results The survey included 524 patients, of whom 54.6% were transplant patients and 45.4% cardiology patients; 326 were male and 198 female, with a mean age of 56 ± 15.1. Of these patients, 97.5% (511/524) knew that respecting therapeutic recommendations improves outcomes and 85.3% (447/524) reported that the CP had explained the importance of correct dosage and mode of administration. However 11.5% (60/524) didn't know the correct mode of administration and 6.3% (33/524) didn't take their drugs on time. 4.8% (25/524) reported occasionally missing a dose, 32% of them (8/25) because of a lack of symptoms, and 68% (17/25) because of a regimen of multidrug treatment. CP counselling was repeated for patients who didn't completely adhere to treatment. For clinical reasons and to increase patient compliance, the physician and CP changed the treatment from mycophenolate mofetil to mycophenolic acid for 7 patients, from immediate release tacrolimus to an extended release formulation for 1, and from mycophenolate mofetil to everolimus for 1. All patients reported that CP counselling had a positive effect and 58.6% asked to meet with the CP more often.

Conclusions Our survey confirmed that CP counselling improves patient outcomes and safety, results in stricter adherence to treatment and changes in patient behaviour, and contributes to better outcomes and faster convalescence.

No conflict of interest.

DGI-070 THE PURPLE WASTE STREAM – HOW NORTH BRISTOL NHS TRUST (NBT) DEALS WITH HAZARDOUS WASTE MEDICINES

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Background All hazardous pharmaceutical waste must be clearly identified, segregated and consigned with the six digit European Waste Catalogue code (18 01 08) within purple-lidded containers to permit safe destruction. [The Hazardous Waste (England and Wales) Regulations 2005 (amended 2009)].

Within NBT, as for most UK hospitals, the route for the disposal of cytotoxic pharmaceutical waste was well established, but did not include cytostatic material.

Purpose To adopt a new mechanism throughout NBT to:

- Identify and segregate hazardous waste
- Raise awareness and train staff to manage waste legally
- Introduce new hazardous labelling and patient information