Micro-costing study of rituximab subcutaneous injection versus intravenous infusion in dutch setting

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to remain effective in controlling demand and thus health spending, so we believe this tool should be maintained in the coming years to efficiently manage the requests for erythroid maturation factors.

E1453

MICRO-COSTING STUDY OF RITUXIMAB SUBCUTANEOUS INJECTION *VERSUS* INTRAVENOUS INFUSION IN DUTCH SETTING

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Background: Rituximab for subcutaneous (SC) administration has recently been approved for use in common forms of diffuse large B-cell lymphoma (DLBCL). This form of rituximab is supplied in ready-to-use vials that do not require individual dose adjustment. It is expected that SC-injection will shorten the treatment time per administration of rituximab in comparison with currently available intravenous (IV) infusion.
Aims: The goal of this study is to identify and compare all direct costs of IV and SC rituximab given to the DLBCL patients in the Netherlands.
Methods: Using a prospective, observational, bottom up, micro-costing study we collected primary data on the direct medical costs of the preparation, administration and acquisition of rituximab. Drug costs and spillage, labor costs, material costs and remaining daycare costs were identified using standardized forms, structured using guideline prices and compared for the IV and SC forms of rituximab.
Results: Measurements were done on 53 administrations (33 IV and 20 SC). The mean total costs of the IV infusion were €2174, and €1907 for the SC injection. The estimated difference of €267 per administration was mainly due to spillage costs and differences in chair time, related daycare costs and drug costs.
Summary and Conclusions: Rituximab administered in the form of SC injection is less costly than its IV form. Taking into account their equal effectiveness, favorable pharmacoeconomic profile of SC rituximab can result in significant savings when transferred to the total DLBCL population in the Netherlands.

E1454

BIOSIMILAR FILGRASTIM FOR THE PREVENTION OF FEBRILE NEUTROPENIA IN ELDERLY DLBCL PATIENTS HAS COST EFFECTIVENESS COMPEERED WITH ORIGINAL FILGRASTIM

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Background: According to American Society of Clinical Oncology guideline on the use of granulo- colony-stimulating factors (G-CSF), primary prophylaxis is recommended for the prevention of febrile neutropenia (FN) in patients who are at high risk based on age, medical history, disease characteristics, and myelotoxicity of the chemotherapy regimen. G-CSF use allows a modest to moderate increase in dose-density and dose-intensity of chemotherapy regimens. Prophylactic G-CSF for patients with diffuse aggressive lymphoma aged 65 years and older treated with R-CHOP should be given to reduce the incidence of FN. A similar biologic medicinal product, commonly referred to as biosimilar, is a copy version of an approved original biologic medicine whose data protection has expired. Among of them, biosimilar filgrastim have been approved and become available in Europe on the basis of comparable quality, safety and efficacy to the originator product. In Japan, biosimilar filgrastim approved in 2013. However, biosimilar filgrastim has not been used widely in Japan though it may have the reduction effect of costs. Here we investigated the efficacy and the cost saving effect in use of biosimilar filgrastim.
Aims: To evaluate the efficacy and the cost saving effect in use of biosimilar filgrastim.
Methods: From July 2013 to December 2014, our Institution used the biosimilar filgrastim (Filgrastim BS®; Mochida Industrial Products, Tokyo, Japan), at dosage of 75μg/day from day +10, for FN prophylaxis and hematological recovery in elderly diffuse large B cell lymphoma (DLBCL) patient who received R-CHOP therapy. These patients were retrospectively compared with same elderly patients who received original filgrastim (Gran®; Kyowa Hakko Kirin Co., Ltd, Tokyo, Japan), at dosage of 75μg/day from day +10 as FN prophylaxis after R-CHOP (from April 2010 to June 2013). Comparisons between qualitative variables were carried out using the χ^2 test. Statistical analyses were performed with the software package Stata version 11 (Stata Corp LP, College Station, TX, USA). In all analyses, P values were 2-tailed, and a P value less than 0.05 was considered to be significant.
Results: A total of 102 elderly patients with DLBCL were identified for this study, comprising 41 patients treated with Filgrastim BS® and 61 treated with Gran®. Comparisons of patient outcomes between groups are presented in Table 1. There was no statistically significant difference among the two patient cohorts. Mortality during therapy was similar in two group (p=0.647). Furthermore, number of injection during one cycle was significant less in Filgrastim BS® group (4.2 *vs* 5.0; p <0.001). In addition, mean medical costs during hospitalization were statistically lower in the Filgrastim BS® group than in the Gran® group (1,356.3±94.1 *vs* 2,357.2±113.4 Euro; p <0.001).

Table 1.

	Biosimilar filgrastim	Original filgrastim	*p* value
Age (year)	71 ± 13	69 ± 14	0.645
Sex (male / female)	20 / 21	32 / 29	0.842
Injection (/ cycle)	4.2 ± 1.7	5.0 ± 1.8	<0.001
FN (episode / total cycle)	7 / 218	12 / 327	0.672
Mortality (number)	1 / 41	2 / 61	0.647
Cost (Euro) (/ cycle)	256.1 ± 8.5	473.2 ± 29.5	<0.001
Cost (Euro) (/ patient)	1356.3 ± 94.1	2357.2 ± 113.4	<0.001

Summary and Conclusions: According to our study, it is revealed that biosimilar filgrastim (Filgrastim BS®) has similar efficacy and safety compared with original filgrastim in febrile neutropenia prophylaxis after R-CHOP therapy in elderly patients. This data confirm previous evidence that supports the non-inferiority of biosimilar filgrastim in this setting. Furthermore, mean medical costs during chemotherapy were statistically lower in the Filgrastim BS® group than in the Gran® group.

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IS CLINICAL TRIAGE EFFECTIVE? AN AUDIT OF OUTPATIENT REFERRALS TO THE HAEMATOLOGY DEPARTMENT AT NORTHWICK PARK HOSPITAL, LONDON NORTHWEST NHS TRUST

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Background: The haematology service at Northwick Park Hospital is known to be busy, with a minimum of seven follow-up clinics and five new patient clinics running weekly. One Friday afternoon new patient session has been introduced last year as a measure to keep up with the new outpatient referrals that come to the department. In order to manage these referrals better, a local consultant-led triage system screens and inputs each one onto a common departmental database.
Aims: The aim is to increase the efficiency and safety of the outpatient service by assessing the necessity of each referral and making sure patients are seen within the right time frame by the appropriate clinician.
Methods: To assess this, an audit was carried out on all the new outpatients referred to the haematology department at Northwick Park Hospital over a 6 month period. Data was extracted and analysed using simple descriptive statistical tools available on Microsoft Excel.
Results: There were 1016 referrals recorded from July 2014 to December 2014, with most cases being triaged within 1 to 3 days on receipt of referral. 14% of these were rejected, either because they were deemed inappropriate (41%) or the patient would have benefitted from an alternative specialist review (11%). Out of all the accepted referrals 24% needed the red cell service, 29% required clotting advice and 34% of patients needed review at a white cell clinic. 14% of haematology referrals had no specified reason documented. 74% of referrals come from primary care, with 55% coming directly from the GP and another 19% via the *Choose and Book* patient scheme. The vast majority of rejected referrals came from primary care (96%) with most clinical questions requiring only simple advice, at times given over the phone. 71% were direct GP referrals and 25% were *Choose and Book* electronic referrals. Triaging cases to avoid unnecessary consultations is very likely to have positive financial implications, considering that costs of GP referrals to the NHS come to £15 billion per year. 156 patients (15%) needed to be seen urgently within a two week period, were the majority were referred due to a white cell disorder (69%). Such cases constitute an average of 40% of a typical new patient clinic list (2 slots out of 5 per clinic session), with an appreciable number of patients ending up requiring hospital admission for expedited work-up.