PP23. An early economic evaluation of a therapeutic innovation in the field of cancerology: the case of the peripheral blood progenitor cells (PBPC) allogeneic transplantation

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Background: Ongoing economic evaluation starting as early as possible throughout the "Research and Development" and diffusion process can provide important data on therapeutic use. Peripheral Blood Progenitor Cells (PBPC) allogeneic transplantation consists in a therapeutic innovation in alternative of the Bone Marrow (BM) allogeneic transplantation. To date, no clinical study including an economic comparison of BM vs PBPC allogeneic transplantation has been reported.
Patients and methods: We compared a group of 10 patients allografted with PBPC in a pilot study to an historical control group of 21 patients who received BM transplantation with HLA identical siblings. Patient characteristics are comparable in terms of median age, diagnosis, sex, conditioning regimen and Graft Versus Host Disease (GVHD) prophylaxis. Direct medical costs were estimated for all patients on the basis of the quantities reported in the patient medical records, from the admission in the Transplantation Unit until day 100 after transplantation (PBPC or BM cells collection were included). Monetary values were attributed to all these quantities on the basis of unit costs (average 1996 French prices).
Results: The median number of days to a platelet count $>25x10^9$/L, independent of platelet transfusion, was significantly shorter in the PBPC group compared with the BM group (in median, 15(10->60) vs. 30(15->68), $p<0.05$)). Average total cost in PBPC group on the first 100 days is significantly ($p=0.02$) lower than that in BM group ($42,790 vs. $64,937), mainly due to a decrease of the initial hospitalization cost (more than 70% of the total cost in both groups).
Discussion: Our clinical and economic comparison was in favor of PBPC allogeneic transplantation even if we consider additional costs due to follow-up between discharge and day 100. Our analysis based on a pilot study shows the ability of economic evaluation to be very early throughout the development process of a medical innovation, which is unfortunately too rare in the field of technology assessment in health care.

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PP24. The cost of the radiotherapy (RT): a Piedmont regional experience

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Because of the 502/92 law that changes the medical structures financing method from productive factors compensation to effectively distributed performance compensation, in 1995 an integrated task-force among radiotherapists and administratives of the Piedmont Region has been formed, in order to estimate the RT costs. In this study, University of Turin, University of Novara, Ivrea, Asti and Pinna Pintor Clinic (Turin) RT units have take part. The work has consisted on 6 steps: 1) the nomenclator, 2) the list of the standard resources, 3) the control of the resources effective consumption, 4) the comparison between 2) and 3), 5) the determination of rates and times; 6) the determination of the quality criteria. These 6 steps have been performed by a technical group and/or a central group. The nomenclator indicates 13 main activities (e.g. roentgentherapy, telecobaltotherapy, linac low energy & high energy, special techniques, brachytherapy, hyperthermia, simulation, dosimetry, customized shieldings, immobilization devices, examination, biological RT). Each main activity is divided in sub-activities (e.g. telecobaltotherapy: flash, one fixed beam, two opposite beams, more than two, etc). The examinated productive factors have been: a) the personnel, b) the employed material; c) the investments; d) the costs of the service; e) the general costs. The cost of the personnel (main cost) has been divided in: A) the common activity; B) the activity in favour to other units; C) the congress activity; D) the research. The times for individuel performances have been estimated, according to professional roles (medical doctor, physicist, technicist, nurse, administrative) for each sub-activities. The RT services cost experimentally estimated is resulted the following, according to submodalities:

PERFORMANCE	COST/SESSION ($)* ± 3%
Roentgentherapy	15
TCT	from 30 to 55
Linac, energy < > 10 MeV	from 38 to 60
Special techniques	from 931 to 2.314
HDR	from 878 to 1.515
Hyperthermia	285
Simulation	from 50 to 292
Dosimetry	from 52 to 286
Examination, treatment planning, follow-up, etc.	from 24 to 59
Immobilization devises, photographic documentation, etc.	from 3 to 66

The quality criteria determination deals with clear definition and documentation of the medical, sanitary and physical personnel; the high energy equipments; the treatments planning; the 3D dosimetry. Thanks to our work, RT national rates have been defined by the Italian Ministry of the Health in 1996 July. Considerations on discrepancies between calculated costs and ministerial rates will be made.

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(* 1$ = 1700 Italian Liras)

PP25. Resource use in the management of patients with Dukes' C colon carcinoma

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Background: A pilot study was undertaken to ascertain medical care patterns and resource use in the management of patients with Dukes' C colon carcinoma.
Methods: Structured interviews of 19 healthcare providers, including surgeons, oncologists, gastroenterologists and nurses, were conducted in 11 hospitals/clinics and four specialist cancer centres in France. Interview questions covered resource use during initial diagnosis and treatment, routine surveillance, disease progression and palliative care.
Results: Patients are primarily referred to gastroenterologists or surgeons by general practitioners (GPs). Following resection and staging of the cancer, patients are usually referred to an oncologist for adjuvant chemotherapy; however, elderly patients (≥80 years) with a poor performance status and who do not wish to undergo such therapy are not always referred to an oncologist for treatment. At the centres with many such patients, only an estimated 30% receive adjuvant chemotherapy, most typically 5FU/Leucovorin for 6 months. Following chemotherapy, patients are managed by their oncologist and/or gastroenterologist, who sees them approximately 3 to 4 times during the first two years and once every 6 months thereafter until the 5th year when patients are referred back to their GP. Surveillance consists of ultrasound or CT examinations and blood analysis, including CEA; colonoscopies and an X-ray are performed once a year. Disease progression is usually detected during follow-up examinations, and an estimated 30% of patients are symptomatic between these visits. These healthcare providers estimated that 50% of these patients will have disease progression, with 80% occurring within two years of resection. If progression is detected within 6 months of adjuvant chemotherapy, either CPT-1 1, 5FU/oxaliplatin or continuous infusion 5FU is given, and if detected beyond 6 months, bolus 5FU/Leucovorin is administered. Progression is most frequently hepatic (>60%), with little