S9 Tt Du C,FU Du B or C<75ys	58.45	6138	117.9	0.24
S10 Tt Du C,FU Du B or C	58.96	6190	157.5	0.29
S11 Tt Du B or C,No FU	59.42	6239	128.5	0.22
S12 Tt Du B or C,FU Du C+	59.75	6274	148.9	0.24
S13 Tt Du B or C,FU Du C	59.94	6294	170.7	0.27
S14 Tt Du B or C,FU Du B or C	60.26	6327	227.7	0.34

In sensitivity analysis, two parameters of decision tree influenced the survival rate at 5 years more than 1.5%: the percentage of Dukes B and C colonic cancer, and the adjuvant chemotherapy. The impact of follow-up on survival rate was less than 1 %.
Discussion: The "classic" strategy (S1O) could decrease the death rate of 1% with a marginal cost of 0.29 10^6 FF by comparison SO (no Tt, no FU). These estimations suggest that the marginal cost of the follow-up is low in strategies with adjuvant chemotherapy. The efficiency of the follow-up must be balanced with the efficiency of screening to detect more colonic cancer at Dukes B stage.

Michel P, Centre de Dépistage et De Traitement Des Tumeurs Digestives, Hôpital Charles-Nicolle, 1 rue de Germont, 76031 Rouen, France

PP48. A review of the pharmacoeconomic research on Gemcitabine (Gemzar™) in the treatment of advanced non-small cell lung cancer

Minshall ME, Liepa AM
Eli Lilly and Company, Eli Lilly Research Laboratories, Global Health Economics Research, Indianapolis, USA

Background: Gemcitabine (GEMZAR™) is a novel nucleoside analogue with unique activity against a range of solid tumors including non-small cell lung cancer (NSCLC) and pancreatic cancer. As of April 17, gemcitabine has been approved for chemotherapeutic treatment in 39 countries: 13 for NSCLC only, 6 for pancreatic cancer only and 20 for both NSCLC and pancreatic cancer.
Methods: Over the past three years, a series of retrospective economic evaluations (cost-minimization and cost-effectiveness) have taken place in order to better estimate the economic impact of gemcitabine (single agent and in combination) in NSCLC treatment compared with other chemotherapeutic regimens.
Results:

Country	Mean cost savings for single agent gemcitabine
USA	$1,879/cycle* vs. cisplatin/etoposide
Spain	$ 1,359/cycle* vs. cisplatin/etoposide
Germany	$ 892/cycle* vs. ifosfamide/etoposide
Belgium	Up to $935/cycle vs. cisplatin/etoposide and carboplatin/etoposide
Sweden	$267/cycle vs. cisplatin/etoposide, $1,778 vs. ifosfamide/etoposide
Canada	$1,174-$6,955/life-year gained vs. best supportive care
Country	**Mean cost savings for gemcitabine + cisplatin**
Italy	All cycles: $4,910 vs. mitomycin/ifosfamide/cisplatin; $35,204 vs. cisplatin/etoposide; $29,464 vs. cisplatin/vinorelbine

* Excluding chemotherapy cost

Discussion: These results suggest that gemcitabine, as a single agent or in combination, may be cost saving or perhaps even cost-effective largely due to the possibility for chemotherapy administration in an outpatient setting and the lower side effect/toxicity profile (e.g. lower febrile neutropenia and nausea/vomiting). This economic advantage assumes equivalent efficacy for NSCLC treatment between gemcitabine and other chemotherapeutic regimens.

Minshall ME, Senior Health Economist, Global Health Economics Research, Eli Lilly and Company, Lilly Corporate Center, Drop Code 2646, Indianapolis, IN, USA

PP49. Management of lung cancer - a comparison of management strategies, outcomes and resource utilisation in specialist and non specialist centres

Stroner PL, A Cull A, Dunnett J
South East Scotland Lung Cancer Group

Background: Incidence rates for lung cancer in Scotland are among the highest in the world - 116 per 100,000 in men and 68 per 100,000 in women. The overall five year survival rate has remained around 7% for more than 25 years. In 1989/90 the National Health Service spent £55-75 million on the care of lung cancer patients but there is insufficient data available to determine whether the most cost effective use is made of this resource. There is also insufficient information available about the true benefits, costs of different treatment, approaches, resource utilisation, and outcome for patients treated in different clinical settings.
Methods: This is a prospective descriptive study of the outcome of clinical management strategies for lung cancer patients in specialist and non-specialist centres. The study population consists of an unsolicited consecutive series of all new lung cancer patients referred to respiratory physicians in SE Scotland. Assessment consists of patient self reported questionnaires to measure quality of life variables, i.e. EORTC QLQ-C30 and the Lung Cancer Module (LC-Cl3) and the Hospital Anxiety and Depression Scale (HADS), together with a structured interview based on the Support Team Assessment Schedule (STAS) to monitor symptoms and resource use. Follow up questionnaires are administered by post with telephone interviews at one, three and six months. Demographic, clinical and resource use data are being collected on all patients. The main resource data are collected from case records and will be costed for each setting. Data collection is ongoing.
Progress: In the first year two main problems have had to be addressed 1) Accrual (physician compliance): Slow initial accrual is not uncommon but the following action is being taken a) progress report circulated to clinicians, b) research nurses review accrual with clinicians at the two poorest recruiting centres c) summary of progress is presented at quarterly meetings of South East Scotland Respiratory Group d) pathology department records are being checked to ascertain whether any patients with a pathologically confirmed diagnosis of lung cancer have been missed.
2) Quality Assurance: There is considerable potential for variability in the interpretation of casenote data. Two measures have been undertaken to address this a) a compendium of data definitions is used in the casenote review b) a random sample of casenotes is independently completed by and cross checked to ensure uniformity of interpretation. Anomalies are reviewed by the whole team. The study opened for recruitment in June 1996 and as of 31st May 1997 524 patients have been registered. The expected recruitment to the study for this period is 737 patients. It was anticipated that a proportion of newly diagnosed lung cancer patients would be unable or unwilling to complete quality of life assessments and the intention was to collect casenote data only for these patients. To date we have casenote data only for 34.3% of the sample. The compliance rate in this study remains high at 73.5%, which is extremely encouraging in this patient population.

Stroner PL, Scottish Cancer Therapy Network, Information and Statistics Division, Trinity Park House, South Trinity Road, Edinburgh, EH5 3SQ, UK

PP50. Economic evaluation of endocrine therapies for post-menopausal metastatic breast cancer

Sorensen S, Munro V, Hutton J
MEDTAP International Inc., London, UK

Background: A cost-effectiveness study is being carried out to compare vorozole, a new nonsteroidal oral aromatase inhibitor, to other endocrine therapies for metastatic breast cancer patients in the UK, France, Sweden and Canada. Endocrine therapies have demonstrated effectiveness in prolonging time to progression of disease for women with post-menopausal metastatic breast cancer, which may have economic implications. Resource constraints have increased the need for evidence of cost-effectiveness. A decision-modelling approach was used to compare vorozole with other

commonly used therapies, taking country-specific treatment patterns into account. Decision-modelling allows for comparators from Phase III trials and other treatments to be compared by using multiple sources of data.
Methods: A decision model was developed from Janssen's unpublished clinical trials for vorozole and megestrol acetate and published clinical trials for anastrozole and formestane. A modified delphi panel was carried out in each country to obtain data which was not otherwise available and to obtain country-specific treatment patterns. Cost data were obtained from databases and published sources. A Q-TWiST (quality-adjusted time without symptoms and toxicity) approach is being used for comparing treatments. Q-TWiST methodology allows for the comparision of treatments by combining the incidence and duration of symptoms and adverse events and clinical outcomes into a single score (Gelber et al, 1986; Gelber et al, 1991).
Results: Separate cost-effectiveness ratios will be calculated for each of the four countries. Sensitivity analysis will be conducted to assess the robustness of the model and the impact of key parameters on the conclusions.
Discussion: Cost effectiveness will be influenced by efficacy, the side effects profile and the cost of management of the different drug regimes. The study will determine if vorozole's longer duration of response, as demonstrated in two Phase III clinical trials, results in a more cost-effective outcome.

Munro V, MEDTAP International Inc., 27 Gilbert Street, London W1Y 1RL, UK

PP51. Information asymmetries and strategic consequences of a prospective payment-like regulation in health care: Evidence from the twenty French cancer institutes

Paraponaris A[1,2,3]
[1]Institut Paoli-Calmettes, Département d'Aide à la Recherche Clinique et à l'Evaluation Médico-Economique, Marseille, France; [2]INSERM 379, Epidémiologie et Sciences Sociales Appliquées à l'Innovation Médicale, Marseille, France; [3]Groupement de Recherche en Economie Quantitative d'Aix-Marseille, Marseille, France

Background: French public and private but non-profit hospitals have been experiencing for two years a major change in the financing mechanisms. Up to then, the financing system was roughly a retrospective payment system. Because of skyrocketting health expenditures, a prospective payment-like system based on the inventory of medical information's about patients' stays implemented in 1991 has been set up. Average costs have been calculated from inpatients and outpatients stays over a sample of 3 regional and 18 general public hospitals, 11 private non-profit hospitals and 3 cancer institutes (for the year 1995). They constitute the backbone of the payments given by the regulator on the basis of the casemix of the hospitals.
Methods: The paper uses the casemix of the twenty French cancer institutes over two years. It puts forward a unified framework in order to assess the genuine components of the (mis-)appreciation of anticancer activity by the prospective payment-like system and the actual pernicious effects entailed by such payment mechanisms.
Results: First the overall decrease in the standard deviation/average cost ratio (a proxy for costs' convergence across hospitals) computed from the said representative sample of hospitals may come from a statistical artefact. Second, despite that downward trend, a significant part of the activity of cancer institutes (up to 25%) is allocated to Diagnosis Related Groups (DRG) which are overrepresented in the casemix of cancer institutes but which value dramatically varies around the average costs. This finding means that the activity of the twenty French cancer institutes may obviously be mis-assessed. Consequently the cancer institutes are likely to prevent from detrimental effects of such a payment system by taking benefit from their own private information about the production cost and the quality of health care. They can achieve this goal either by cutting the length of stay for DRG which payment is cut (which can be considered as a cut in the health care quality), by selecting patients whose stays are classified in DRG which payment increases, or by both ways.
Discussion: The former strategy (decrease in health care quality) has already been documented as a moral hazard effect. The latter one has been described as a selection effect when the hospital actually selects patients, as DRG creep when the DRG coordinator of the Hospital uses a crafty legal codification in order to assign a patient stay to the most profitable DRG. However papers about those hospitals strategies did not cope with a specialized medical field like anticancer treatments nor dealt with French health care system. The results clearly shed light on a necessary and quick reassessment of the DRG costs involved in the treatment of cancers.

Paraponaris A, DARCEME, Institut Paoli-Calmettes, 232 Bld de Sainte-Marguerite, 13273 Marseille Cedex 9, France, E-mail: alain@ehess.cnrs-mrs.fr

PP52. Determinants of treatment costs for stage III and IV colon cancer patients in Latvia. Evaluation of oral treatment with Ftorafur and Ftorafur/Leucovorin

Plate S, Berzins J
Latvian Medical Academy Hospital, Latvian Cancer Center, Riga, Latvia

Background: The standard treatment regimen for stage III colon cancer patients in adjuvant setting in Latvia is Fluorouracil (5FU) and Leucovorin (LV); as for stage IV patients, no standard treatment is established. The characteristic feature of chemotherapy treatment as a rule is administering of the regimen on impatient basis. Reason for such strategy is based on specific social and financial situation of the society during transitional period economy - large hospitals located in the capital and low income of patients arriving from distant regions with financial situation not allowing them to receive treatment on out-patient basis.
Methods: As hospitalization increases the costs of treatment, an investigation is being carried out evaluating oral ftorafur (FT) 600 mg/m²/d 1-28 and FT 600 mg/m²/d 1-28 + LV 20 mg/m²/d 1-28 in decreasing costs and maintaining the efficacy of treatment in stage III as well as quality of life (QoL) in stage IV colon cancer patients.
Results: First results on oral usage of FT and FT + LV have shown efficacy of both regimens comparable to that of standard treatment in stage III colon cancer. In stage IV colon cancer patients several advantages of oral treatment were seen, including reduced toxicity and improved well-being. At the same time in both stages significant decrease in costs of treatment is observed.
Conclusion. Our results as well as data from other sources lead to the conclusion that oral treatment can be used as an alternative to standard regimen; it seems to us that such treatment may serve as a base for home therapy in stage III and IV colon cancer patients.

Plate S, Department of Medical Oncology, Latvian Medical Academy Hospital, Pilsonu St. 13, Riga, Latvia

PP53. A quality-adjusted survival (Q-TWIST) analysis of EORTC trial 30853 comparing maximal androgen blockade (MAB) with orchiectomy in patients with metastatic prostate cancer

Rosendahl KI[1], Curran D[2], Kiebert G[2], Cole B[3], Weeks JC[4], Denis LJ[5], Hall RR[6]
[1]Stockholm, Sweden; [2]Brussels, Belgium; [3]Providence, United States; [4]Boston, United States; [5]Antwerp, Belgium; [6]Newcastle-upon-Tyne, UK

Background: Prostate cancer is nowadays the first or second most common malignancy in industrialised countries for men. Although early stages of prostatic cancer may be cured by local modalities, the treatment of metastatic disease is much less satisfactory and constitutes a major problem in the management of the disease. The 'classical' data analysis of this trial indicated a significantly better time to progression and duration of survival for the group of patients who received MAB. Most frequently reported side effects for both treatment arms were hot flushes and gynecomastia, but both symptoms were more frequently reported by patients in the MAB treatment arm (Urology 42 no 2: 119-130, 1993).
Methods: The aim of this study was to re-analyse these data by applying the Q-TWIST method to obtain a summary measurement of the trade-off