CURRENT CHEMOTHERAPY AND MONOClonAL ANTIBODY USE PATTERNS IN METASTATIC COLORECTAL CANCER IN WESTERN EUROPE
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OBJECTIVES: Treatment outcomes improved in metastatic colorectal cancer (mCRC) due to the introduction of the monoclonal antibodies (mAb) in combination with chemotherapy. This study described current treatment patterns of chemotherapy and mAbS in clinical practice in 4 EU countries. METHODS: This cohort study used pharmacy-refill data from the Lifelink® Oncology Analyzer Database (OAD). Patients with mCRC were identified across 4 EU countries (France, Germany, Italy, and Spain). All patients aged ≥21 years at mCRC diagnosis were included. Treatment patterns in 2009 were examined descriptively by lines of therapy. RESULTS: The study sample included 2734 mCRC patients (61% male, median age category 61–70 years) with 862, 656, 567, and 649 from France, Germany, Italy, and Spain, respectively. In 1st-line, more patients received FOLFOX-containing regimens than FOLFIRI-containing regimens in Germany (42% vs. 30%) and Spain (25% vs. 16%), while in Italy and France, the reverse was true (Italy: 34% FOLFOX vs. 29% FOLFIRI; France: 26% vs. 19%). In 2nd-line, more patients received FOLFIRI-containing regimens than FOLFOX-containing regimens in Germany (36% vs. 18%), Italy (29% vs. 14%), and Spain (34% vs. 6%), while similar proportions of FOLFOX and FOLFIRI were used in France (18% vs. 17%). In 1st line, Bevacizumab (Bmab) was administered to 44% of patients in Italy, 42% in France, 37% in Germany, and 30% in Spain, while Cetuximab (Cmab) use ranged from 14% in Spain to 7% in Italy. In 2nd-line, Bmab was used in 37% of the patients in Germany, 18% in France, 33% in Italy, and 30% in Spain, while Cmab was used in 30% of the patients in Spain, followed by 26% in Italy, 20% in Germany and 17% in France. CONCLUSION: FOLFOX and FOLFIRI-based regimens are common standard of care chemotherapies, and monoclonal antibodies are routinely combined with these chemotherapies. 

INEQUALITIES IN GEOGRAPHICAL ACCESS TO ONCOLOGY SERVICES IN GREECE AND THEIR IMPACT ON PATIENTS AND CARERS
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OBJECTIVES: Previous studies (NSPI 2008, 2009) demonstrated that clustering of oncology resources exceeds the spatial concentration pattern of health-care services in Greece, thus resulting to substantial cross-regional flows of cancer patients. The objective of this study was to assess the impact of geographic accessibility on patients when selecting care and during treatment for cancer. METHODS: Face-to-face interviews with 106 patients diagnosed with cancer from three specialized anticancer hospitals (two Athens and one Thessaloniki). Questionnaire was designed by a specialized Delphi panel of the NSPI to capture patient preferences. Median patient age was 54.5 years. Data were analyzed using SPS v15.0. RESULTS: Patients across the board choose their hospital on the basis of specialization (50%), physician reference (41.5%), and hospital reputation (35.8%). Sixty-three percent of patients face access barriers, most commonly cost of health-care services (44.3%), distance from place of residence (37%), and demand time (33%). 76.4% of patients return to place of residence at treatment intervals and 43.4% immediately after treatment. To receive treatment, 23.6% stay at homes of relatives, 14.2% at hotels, and 1% in hospital-owned houses. Fifteen percent of patients undergo treatment cycles repeating every 15–30 days. Patients travel predominantly by own car (48.1%), 4.7% travel by taxi reimbursed by their insurance fund and 1% by hospital ambulance. 84% of patients travel accompanied by one or more carers. At treatment intervals, only 8% of patients are supported by physicians at place of residence. CONCLUSIONS: Significant cross-regional flows of cancer patients to access adequate treatment lead to substantial direct and indirect costs for patients and their carers in a strained financial environment. Patients also face significant gaps in integrated support during treatment intervals. A shift in the organization of cancer services is essential for the system to be responsive to expressed patient needs especially during treatment.

HEALTH RESOURCE UTILIZATION OF SUBJECTS RECEIVING DENOSUMAB AND ZOLEDRONIC ACID IN A RANDOMIZED PHASE 3 TRIAL OF ADVANCED BREAST CANCER PATIENTS WITH BONE METASTASES
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OBJECTIVES: New imaging tests such as computed tomography (CT), [18F]fluorodeoxyglucose-potassium emission tomography (FDG-PET) scanning, and magnetic resonance imaging (MRI) are not recommended for staging or follow-up of asymptomatic patients with EBC according to current guidelines. However, frequently these tests are requested even in the absence of a clinical indication. The purpose of this study was to evaluate how the availability of new imaging techniques has changed staging and follow-up modalities in EBC patients and to estimate its cost implications. METHODS: We analyzed clinical computerized information from 457 general practitioners assisting a total number of 630,000 inhabitants of the Campania region in the south of Italy. We analyzed clinical computerized information from 457 general practitioners assisting a total number of 630,000 inhabitants of the Campania region in the south of Italy. RESULTS: The mean number of diagnostic tests prescribed per patient (NdP) and the mean costs per patient were evaluated during the first post-diagnosis year. The mean was compared between each year using one-way analysis of variance. Costs were expressed in euros (mean ± SD). RESULTS: We identified 576, 489, 474, and 497 new prevalent cases of EBC in 2005, 2006, 2007, and 2008, respectively. Overall, there was a significant increase in the mean number of imaging tests prescribed per patient from 2005 to 2008 (P < 0.0001). No change of the mean number of mammograms, bone scan, and chest x-ray requested per patient was observed. The mean costs per patient also significantly increased from €354.96 ± 581.32 in 2005 to €546.78 ± 837.36 in 2008 (P = 0.004). CONCLUSIONS: CT, FDG-PET, and MRI employment for EBC patients in daily clinical practice has been steadily growing over the past 4 years with cost repercussions. However, there are no data to support their role in routine breast cancer care.
cancer staging or surveillance in asymptomatic patients. Further studies are needed to characterize patients’ typology who deserve intensive staging and follow-up procedures.

DECIDING UPON NEW AND EXPENSIVE TECHNOLOGIES IN HEALTH CARE: REAL OPTIONS ANALYSIS IN PROTON THERAPY

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OBJECTIVES: Radiotherapy with protons is a promising new treatment modality, for which many patients are being made worldwide. However, the investment costs of proton therapy (PT) are high (roughly €90 million) and limited clinical evidence is available. Also, previous studies have indicated that PT may be cost-effective, but show considerable decision uncertainty. Consequently, it is unclear whether we should adopt PT now, or wait for more information. Adoption involves a risk of facing high sunk costs, while delay may impose opportunity losses because patients receive suboptimal treatment. Real options analysis (ROA), a technique originating from financial economics, assists in making this trade-off. METHODS: We examined whether to adopt PT, as compared to stereotactic body radiotherapy, in the treatment of stage I non-small cell lung cancer (NSCLC). Three options are available: adopt without further research (AN); adopt and undertake a trial (AT); or delay and undertake a trial (DT). The decision depends on the expected net gain of each option, which is calculated by subtracting its total costs from its expected benefits. RESULTS: The expected net gain of AT and DT were positive, indicating that we should not decide to adopt without further research (AN). Up to a sample size of 1000 patients, the expected net gain of AT was higher than DT, indicating that the best option was to adopt PT now, or wait for more information. Adoption involves a risk of facing high sunk costs, while delay may impose opportunity losses because patients receive suboptimal treatment. Real options analysis (ROA), a technique originating from financial economics, assists in making this trade-off. Adoption involves a risk of facing high sunk costs, while delay may impose opportunity losses because patients receive suboptimal treatment. Real options analysis (ROA), a technique originating from financial economics, assists in making this trade-off.

SYSTEMATIC LITERATURE REVIEW ON THE INTER AND INTRA LABORATORY VARIABILITY FOR BCR-ABL MOLECULAR MONITORING

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OBJECTIVES: During disease monitoring of patients with CML, for patients with a complete response, residual leukemia can be assessed by real-time quantitative polymerase chain reaction (RQ-PCR). There are several “home-brew” and commercially available BCR-ABL gene transcript detection methodologies in use, each requiring its own validation for the specific laboratory and giving rise to laboratory-specific results. Harmonization of results according to an international scale is underway, but use is limited for several technical reasons. Information is required for decision makers on the accuracy and reproducibility of the tests and their costs and cost-effectiveness. The objective of this study was to assess the quantity and quality of such information. METHODS: English language systematic literature review on the intra- and inter-laboratory variability for BCR-ABL molecular monitoring, testing, inter-rater reliability across manual assays and the costs and cost-effectiveness of molecular testing in CML. RESULTS: From 88 papers retrieved for detailed analysis, we found no studies which conducted a repeated test procedure on the same patient sample using the same technical approach in the same laboratory. There are a large number of studies which have compared alternative approaches using the same patient sample in molecular monitoring in the same laboratory. Several well-conducted studies have examined the variability of results from different laboratories in controlled environments. We found no studies which compared inter-rater reliability or examined the costs or cost-effectiveness of molecular testing in CML. CONCLUSIONS: There is a reasonable body of evidence on certain aspects of analytical validity, for CML molecular testing, but other aspects of analytical validity and the costs and economics of molecular diagnostics in CML appear to be an unexplored area. Testing variability has potentially serious implications for patient outcomes and more information for decision-makers to assess relative costs and cost-effectiveness is required.

TARGETED CANCER THERAPIES: PRICING, ACCESS, AND UPTAKE

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OBJECTIVES: The oncology market has become the major focus areas for pharmaceutical and biotech firms. As of March 2009, 15,732 of 39,747 Phase I, II, and III trials listed on clinicaltrials.gov were related to cancer (approximately 40%). This large interest in oncology stems from market success of cancer therapies launched in the past decade and the existence of high unmet need to treat different types of cancers. As the number of FDA approved cancer therapies increases, there is a need to understand treatment patterns of these cancer drugs. METHODS: To understand the trends in usage and sales of cancer therapies, we analyzed the US market (sales and prescription) 2003–2008 data for all FDA-approved cancer drugs. Drugs were categorized as targeted cancer therapies, chemotherapeutic agents, monoclonal antibodies, small molecules, branded, and generics. RESULTS: During the past 5 years, the usage of both targeted cancer therapies and chemotherapy drugs increased at a double digit rate. From 2003 to 2008, the total prescriptions for targeted cancer therapies and chemotherapeutics increased by 66% and 30%, respectively. While the sales of both types of these drugs are expanding, the majority of sales growth is attributed to an increasing uptake of targeted cancer drugs. The sales share of targeted cancer therapies in the US oncology market increased from 36% in 2004 to 56% in 2008. Among targeted cancer therapies, majority (more than 75%) of uptake belongs to monoclonal antibodies. CONCLUSIONS: The usage and sales trends show a significant increase in the use of cancer drugs. The high usage of targeted cancer therapies versus chemotherapeutics shows the rapidly changing nature of cancer treatment regimen.