first evaluated: a logistic regression allowed to determine if dose, volume or type of preparation influenced the rate of non-conformity. Then, a single sampling plan by attributes was chosen with an acceptance quality level (AQL) of 2.2%, which is our baseline quality requirement. AQL is defined by the sample size (n) and the number of allowed non-conformities (a).

Results: The logistic regression analysis first evidenced that 6 cytotoxics had a higher rate of non-conformity while a sampling plan was developed for 6 others (5-FU, IFM, CPM, CDDP, 4-EPI, DXR). A tighter inspection and the setting of corrective actions in 2004 allowed to improve quality level and include 2 more drugs (ARA-C and DFDC) in this sampling plan. Among the 26 drugs, 12, representing 10% of the number of batches, were not sampled as their production flow is low. Now, 66% of the number of batches, corresponding of 8 cytotoxics, are included in the sampling plan and 24% are expected to be sampled soon.

Conclusions: This statistical analysis allowed to determine the optimal sample size to analyse. The sampling plan can not be applied to only 10% of the number of batches, while 66% are included. In 2004, 50% of the manufactured batches could have been analysed with minimal loss in quality level precision. Quality levels are now calculated and analysed every three months, which allow a tighter follow up of the production than previous years and to set up correctives actions.

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590 POSTER

Primary brain tumours occurrence: is it related to socioeconomic factors?

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Background: Little is known about the role of social factors in the brain tumours epidemiology. We speculated that demographic factors and differences in health care may affect brain tumours incidence. The socio-economical cataclysms in Georgia, former Soviet republic, can be viewed as a natural model for testing this hypothesis. With this aim a hospital-based study was conducted to evaluate the frequency of distribution of brain neoplasms by histology.

Material and methods: We retrospectively reanalyzed all biopsy tissue specimens taken from operated patients, who underwent surgery at the Institute of Neurology & Neurosurgery from 1984 to 1988 (n = 243) and from 1996 to 2000 (n = 543), i.e. before and after Soviet empire destroying respectively. Histological verification was done according 1993 WHO classification of tumours of the nervous system.

Results: The following frequency of intracranial tumours has been observed within cohorts: glioblastoma & anaplastic astrocytoma 30 and 29%, astrocytoma 6 and 9%, meningioma 27 and 30%, neurinoma 4.5 and 7%, medulloblastoma 2 and 2% (cohorts I and II respectively). Astrocytic tumours were the most common neoplasms among gliomas (78 and 82%), oligodendroglial accounted for 19 and 10% and ependymal comprised 3 and 8% respectively. Distribution by sex was the same in cohorts: nearly equal in gliomas, but meningiomas were about twice more common in women.

Conclusions: No significant difference was found between tumours distribution in cohorts. The results seem do not support a hypothesis of possible association between socioeconomic factors and brain tumour developing. Observed increase in operated patients' number in recent 5 years may be accounted for by improvement of the diagnostic and treatment modalities.

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The use of hospital discharge diagnoses for epidemiologic evaluation in breast cancer in Italy

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Background: The aim of our study is to evaluate the utility of the hospital discharge diagnoses (HDDs) as a source of cancer epidemiological information regarding resource utilisation and patterns of care and to compare the data among different Italian regions.

Methods: The diagnoses and procedures of all hospital discharges were coded according with the ICD-9-CM. We analysed all HDDs with the main or secondary medical diagnosis of invasive breast cancer (code 174) relative to the population resident in Abruzzo (Centre, 1,262,379 inhabitants by 1st Jan '02), Puglia (South, 4,019,500 inhabitants by 1st Jan '02) and Veneto (North, 4,529,823 inhabitants by 1st Jan '02) during the three-year period 2000–2002.

Results: We identified 8,065 HDDs in Abruzzo, 20,742 in Puglia and 39,634 in Veneto. The main characteristics are reported in the table. We did not perform comparisons when some data were missing and for the LOS. The table shows statistical significant differences in almost all the comparisons. The difference in terms of number of HDDs could be explained by the higher incidence of breast cancer in the North of Italy. These data demonstrate the geographic variability in terms of use of resources for breast cancer.

	Abruzzo	Puglia	Veneto	P value
HDDs on total HDDs (%)	1.3	1.3	2.7	< 0.0001
Day Hospital (%)	45	29	50	< 0.0001
Age < 50 yrs (%)	21	26	23	< 0.0001
Primary diagnosis (%)	55	55	51	< 0.0001
Passive migration (%)	11	6	5	< 0.0001
Private hospital (%)	3.6	9		
Dept (%)				
Surgery	39	38		
Oncology	39	23		
Medicine	8	29		
Radiotherapy	9	3		
LOS (mean) (days)	7.7	6.4	7.2	
Ordinary	7.7	6.8	8.6	
DH	7.6	5.4	5.8	
Surgery	30	32	31	n.s.
LOS (days)	7.1	8.4	6.5	
Conservative (%)	64	57	56	< 0.0001
Chemotherapy	32	38	32	< 0.0001
Primary (%)	59	61		
LOS (days)	9	4.1		
Advanced (%)	41	39		
LOS (days)	11	5.1		

Conclusion: Our study shows that HDDs can provide useful information for clinical-epidemiologic evaluations. Hospital discharge data can represent an important source for estimating the burden of health conditions on the health system.

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A comparison of cancer epidemiologic data from Central Asia and the Caspian Region

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Background: Cancer is a major global health concern. Significant resources are mobilized towards cancer research for early detection, prevention, drug discovery and clinical trials. Central Asian countries, particularly those neighboring the Caspian Sea, are faced with major environmental health problems. The effects of these factors on cancer have not yet been fully investigated in this region. For initiating any cancer prevention program, it is important to identify environmental and other risk factors specific to a given region. This requires the establishment of reliable and complete databases for the entire region. The main purpose of this study is to identify major differences in the incidence of various types of cancer reported from three countries of Central Asia and the Caspian Region, Kyrgyzstan, Tajikistan and Azerbaijan.

Materials and methods: The data for this study was obtained form the IARC online database (GLOBOCAN 2002). Although the populations of different countries are those estimated for the middle of 2002, the disease rates are generally 2–5 years earlier. The numbers of cases, deaths and cancer survivors are computed by multiplying the estimated rates by the year 2002 population estimates for each country. Cancer data published in the annual reports of the ministries of health of these three countries were also reviewed. Due to mass migration of male residents of Tajikistan in the past decade, our research focus is on cancer among females.

Results: Age-standardized incidence rate of breast cancer per 100,000 population is 23 in Kyrgyzstan, 13.2 in Tajikistan and 31.5 in Azerbaijan. The rate for lung cancer among females is 5.5 in Kyrgyzstan, 3.7 in Tajikistan and 6.1 in Azerbaijan. The rate for stomach cancer is 17.9 in Kyrgyzstan, 15.3 in Tajikistan and 15.6 in Azerbaijan. The rate for esophageal cancer is 3.5 in Kyrgyzstan, 6.1 in Tajikistan and 7.0 in Azerbaijan. The rate for cervical cancer is 21.6 in Kyrgyzstan, 9.9 in Tajikistan and 8.2 in Azerbaijan. The rate for non-Hodgkin lymphoma is 3.3 in Kyrgyzstan, 3.1 in Tajikistan and 5.4 in Azerbaijan. The rate for leukemia is 3.2 in Kyrgyzstan, 3.1 in Tajikistan, and 4.1 in Azerbaijan.