then the overall optimal chemotherapy utilisation rate for lung cancer increases to 77% (73% for NSCLC). Another controversial issue is whether chemotherapy is indicated in patients with advanced (Stages IIIB and IV) NSCLC who have performance status level of ECOG 2; chemotherapy is indicated for these patients in this model but if they do not receive chemotherapy then the overall utilisation rate falls to 63%. The optimal rate of chemotherapy utilisation for the initial management of lung cancer is 68% (63% NSCLC and 93% SCLC).

Optimal vs actual chemotherapy utilisation rates for lung cancer (First treatment)

	Chemotherapy utilisation		
	Optimal rate (%)	Actual rate (%)	
		USA 2004 (NCDB)	UK 2003 (TCR)
All lung cancer	68	41	21
NSCLC	63	36	23
SCLC	93	67	58

Conclusions: A readily adaptable benchmark model of optimal chemotherapy utilisation in lung cancer was constructed. Comparison of recent actual rates of chemotherapy utilisation with the optimal model shows that chemotherapy is under-utilised in the initial management of lung cancer.

1218 POSTER

Do offsprings of fathers with testicular malignancies have disadvantages?

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Background: The aim of the present study was to investigate whether children, whose father was treated with chemotherapy and/or irradiation, have any disadvantage (prematurity, pathological perinatal event, congenital malformation, malignancy) compared to the healthy population.
Material and Methods: Thirty families were involved in the study, where the father was treated due to testicular malignancy. A detailed history of the family was taken, physical examination, laboratory- and immunology tests were done, determination of the bone age, abdominal sonography, electrocardiography and cytogenetical investigation were performed.
Results: In these 30 families there were 52 pregnancies. Ten of them were ended by abortion or still-birth. Forty-two pregnancies resulted in delivery, there were three twin-pairs. We examined 45 children in 30 families. The male:female ratio was 1.5:1, the mean age was 5.8 years. Two newborn infants were born with less than 2500 grams. Mild perinatal events were detected in two cases (infection, transitory respiratory problem). There were no major malformations. From 45 children 3 had any minor anomalies. Two other mild malformations were detected by the abdominal ultrasound (pyelon duplex, pyelectasy). With cytogenetic examination no spontaneous chromosome fragility was detected. In six cases the fragility was increased after induction with mytomycin C, but in each case this increase was not significant. One child is treated with retinoblastoma. A 2.3 year-old boy is followed up with benign conjunctival tumor.
Conclusion: From 52 pregnancies where the conception occurred after the therapy of the father because of malignant testicular tumor, the intrauterine loss is higher than expected, but not significantly.
Among the 45 offsprings of 30 men, treated because of testicular malignancy, a higher incidence of major malformations, pathological somato-mental development, increased chromosome fragility or malignant disease did not occur, however to confirm it more families should be studied with longer follow-up.

1219 POSTER

Cancer mortality in 13 to 29 year olds in England and Wales, 1981–2005

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Cancer is the most common natural cause of death in teenagers and young adults (TYAs) in England. The aim of this study is to present an overview of the mortality in persons aged 13 to 29 years in England and Wales between 1981 and 2005.
Data on the resident population and registrations of death from neoplasms were provided by the Office for National Statistics (London). More than 20,000 cases were extracted for approximately 303 million person-years (mpy) at risk, stratified by time period (five quinquennia) and by age group (13 to 14, 15 to 19, 20 to 24, and 25 to 29 years). The variability of the rates by sex, age group and time period was assessed with chi-squared test statistics, log-linear models and, to account for non-linear temporal trends, generalized additive models under Poisson distribution assumptions.
Overall, the mortality rate was 65.6 mpy. Malignant neoplasms of the central nervous system showed the highest mortality rate (8.5), followed by myeloid and monocytic leukaemia (6.6), lymphoid leukaemia (6.4), bone tumours (5.4) and non-Hodgkin lymphoma (5.2). These groups together accounted for almost 50% of all registered deaths under study. The mortality rate for males (72.4) was 23% significantly higher than for females (58.6). Males showed significant higher mortality rates than females in almost all diagnostic groups. In general, mortality increases with age. There were significant decreases in mortality over time. Overall the annual percentage change in mortality rates between 1981 and 2005 was minus 1.86 (95% confidence interval −2.09 to −1.62).
In conclusion, mortality rates are higher in males and in older TYAs. Diagnostic groups with the highest mortality differ from those with the highest incidence. Mortality has decreased over time.

1220 POSTER

MTHFR polymorphisms and lung cancer risk in a Japanese population

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Background: Methylenetetrahydrofolate reductase (MTHFR) activity correlates with the balance of DNA precursors, which can lead to excess accumulation of deoxyuridine triphospahate in the nuclear pool leading to uracil misincorporation into DNA instead of thymine. Because a 5,10-methylenetetrahydrofolate reductase (MTHFR) polymorphisms may reduce the MTHFR activity, we hypothesized that the MTHFR polymorphisms are associated with risk of lung cancer.
Materials and Methods: The studied groups consisted of 190 patients with histologically confirmed primary lung cancer and 108 cancer-free patients. The C677T and A1298C polymorphisms were detected using PCR-RFLP technique. Unconditional logistic regression was used to compute the odds ratios (ORs) and their 95% confidence intervals (CIs), with adjustment for several covariates found to be associated with lung cancer risk. All the statistical analyses were performed with the computer program STATA Version 8.2 (STATA Corporation, College Station, TX).
Results: As for the C677T polymorphism, the genotypic frequencies for CC, CT, TT in the lung cancer cases were 31.6%, 48.0% and 17.8% and 39.0%, 47.2%, 13.9% in controls, respectively. We did not observe a departure from Hardy-Weinberg equilibrium in the control group (P = 0.94). The TT genotype was nonsignificantly higher among the lung cancer cases than among controls (OR = 2.40, 95% CI = 0.78−7.37). The significant excess risk of the TT genotype was only observed among the lung cancer patients with squamous cell carcinoma (OR = 5.80, 95% CI = 1.24−26.9). As for the A1298C polymorphism, the genotypic frequencies for AA, AC, CC in lung cancer cases were 61.6%, 34.2% and 4.2% and 63.9%, 31.5%, 4.6% in controls, respectively. The genotypic frequencies for this polymorphism in controls were also consistent with Hardy-Weinberg equilibrium (P = 0.76). The A1298C polymorphism was not associated with lung cancer risk. The two polymorphisms were in linkage disequilibrium (D' = 0.514).
Conclusions: The 677TT genotype was associated with an increased risk of lung cancer. Theoretically, a reduction in the MTHFR activity may increase lung cancer risk due to altered DNA methylation resulting from lower levels of 5-methyltetrahydrofolate. The A1298C polymorphism was not associated with lung cancer risk in our study population. The biochemical association of the A1298C polymorphism is controversial. This polymorphism may not influence the specific activity of the enzyme.

1221 POSTER

Does methadone maintenance therapy increase the risk of new cancers?

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Recent in vitro data suggest that opiates facilitate endothelial cell migration and proliferation by transactivation of the VEGF receptor, while opiate