

Case	Age at AML	SCT+tdi	SMN	Period since AML diagnosis (y)
1	10 y	+	dural sarcoma	3.5
2	13 y	+	cholangiocarcinoma	18.2
3	14 y	+	papillary thyroid carcinoma	19.0
4	9 y	+	papillary thyroid carcinoma	13.7
6	6 y	+	round cell sarcoma pelvis	7.4
7	9 y	+	papillary thyroid carcinoma	7.8
8	9 y	+	osteosarcoma thoracic spine	8.9
5	3 y	-	Ewing's tibia	5.0
9	22 mo	-	parotid mucoepidermoid carcinoma	10.0
10	4 y	-	rhabdomyosarcoma of perineum	2.5

**Conclusions:** This study confirms that survivors of childhood AML do not appear to be at an especially high risk of second malignancy compared with childhood cancer survivors in general (ref Jenkinson, Br Journal Cancer 2004. SIR 6.2 among 16,541 three year survivors of childhood cancer in Britain treated up to end 1987). The association of SCT with tbi followed by thyroid carcinoma has been described by others and may have implications for clinical follow up.

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POSTER

# The importance of environmental and lifestyle factors related to the risk of lung cancer. An epidemiological study of over 4000 Czech men and women

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**Background:** The aim of the study is to investigate the impact of diet/physical exercise on the risk of lung cancer in women and men, and to reveal interactions between smoking and other risk factors.

**Materials and Methods:** In a hospital based case-control study data collected by in-person interviews from 1096 microscopically confirmed lung cancer cases (587 female, 509 male) and 2966 controls were analyzed using unconditional logistic regression stratifying by appropriate factors.

**Results:** In subjects with adenocarcinoma, protective effects were observed for wine (OR=0.68) and physical exercise (OR=0.59) among women, while no significant associations were found among men.

In patients with squamous-, small- and large cell cancers, protective effects appeared for wine (OR=0.71) and physical exercise (OR=0.70) among women, and for apples (OR=0.62) among men.

Excess risk of squamous-, small- and large-cell cancers combined was associated with the intake of red meat in women (OR=1.66).

Comparing the effects of diet and physical activity on lung cancer risk among nonsmokers versus smokers, effect modifications (interactions) were found for black tea (P=0.009), and milk/dairy products (P=0.034) among women, and for spirits (P=0.044) among men.

**Conclusions:** Diet and physical exercise may act as important modifiers of the association between smoking, the dominant risk factor, and lung cancer risk. In this study, statistically significant associations of diet/physical activity with the risk of squamous-, small- and large cell cancers were observed more frequently than those with adenocarcinoma. Supported by grant #NR/8411-3 of IGA of Ministry of Health of the Czech Republic.

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POSTER

# Early epirubicin-induced myocardial dysfunction revealed by serial tissue doppler echocardiography (TDI). correlation with inflammatory and oxidative stress markers

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**Background:** A phase II open non randomised trial was carried out in a group of epirubicin-treated patients with cancer at different sites with the aim to detect early preclinical changes, predictive of risk of heart failure. All subjects underwent conventional echocardiography, as well as tissue Doppler imaging (TDI) with Strain Sigma and Strain Rate (SR), a very accurate technique in detecting minimal changes in the cardiac left ventricular (LV) function. Moreover, echocardiographic changes were compared with those of a series of biochemical markers of both myocardial damage and inflammation/oxidative stress.

**Patients and Methods:** Sixteen patients with histologically confirmed tumors at different sites, scheduled to be treated with epirubicin-based chemotherapy were enrolled.

**Results:** A significant impairment of the systolic LV function was observed at epirubicin 200 mg/m<sup>2</sup>; the SR peak decreased significantly in comparison to baseline (1.82±0.57 sec<sup>-1</sup> vs 1.45±0.44 sec<sup>-1</sup>), whereas the Sigma remained unchanged. The following significant changes of LV diastolic function occurred, only after the epirubicin dose of 300 mg/m<sup>2</sup>: a decrease of conventional E/A (1.16±0.31 vs. 0.93±0.24), and a reduction of both Em wave (8.86±1.73 cm/sec vs. 7.51±2.30 cm/sec) and of Em/Am ratio (1.09±0.51 vs. 0.83±0.51), measured with TDI technique. No significant changes of LV ejection fraction were observed. Levels of IL-6, sIL-6R and ROS increased significantly, whilst GPx decreased significantly after epirubicin 200 mg/m<sup>2</sup>. A significant correlation between the reduction of SR peak (DeltaSR) at epirubicin 200 mg/m<sup>2</sup> and increase of IL-6/ROS and decrease of GPx was observed. The multiple regression analysis showed that the only independent predictive variable of DeltaSR was ROS level.

**Conclusions:** Our data show that: (a) subtle cardiac abnormalities may occur at epirubicin doses significantly below those known to be potentially clinically harmful; (b) earliest myocardial impairment affects the LV systolic rather than diastolic function. Early contractility impairment was associated with high levels of ROS and markers of inflammation. The clinical meaningfulness of our findings warrants further investigations on a higher number of patients for a longer period of follow-up.

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POSTER

# Mortality trends for colorectal cancer in Spain, 1980-2004

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**Background:** Monitoring cancer burden is of great value to provide opportunities for aetiological research and prevention. We examined recent trends in colorectal cancer mortality in Spain.

**Methods:** Age-standardized (world standard) death rates per 100,000 were derived from the WHO mortality database for the period 1980-2004. During the calendar period considered, two different revisions of the International Classification of Diseases were used ICD-9, codes 153-154 and ICD-10, codes C18-C21. Jointpoint analysis was performed to identify significant changes in death rates using the software provided by the Surveillance Research Program of the US National Cancer Institute. In jointpoint analysis, the best fitting points are chosen where the rate changes significantly. The analysis starts with the minimum number of jointpoints (0 jointpoints), and tests whether one or more jointpoints (up to three) are significant and must be added to the model. The estimated annual percent change is then computed for each of those trends by fitting a regression line to the natural logarithm of the rates, using calendar year as a regressor variable. To test for differences among men and females, we computed mortality sex ratios (males/females) for each year, with the corresponding 95% confidence intervals.

**Results:** In men, mortality for colorectal cancer showed a persistent upward trends over the period considered: death rates increased by 4.16% annually between 1980 and 1994 (from 9.55 to 16.09/100,000) and by 0.85% between 1994 and 2004. For women, the death rates increased by 3.91% between 1980-1988 and by 1.27% between 1988-1996. A declining trend for colorectal cancer mortality (-0.86% per year) was observed between 1996-2004 (rates ranged from 10.06 to 9.54/100,000). The mortality sex rate ratios (M/F) increased from 1.36 (95% CI:1.24-1.50) in 1980 to 1.86 in 2004 (95% CI:1.72-2.01).

**Conclusion:** Sex differences for colorectal mortality have been widening in the last decade in Spain and may be attributable, in part, to differential sex exposure to major environmental risk factors in absence of known gender-based differences in diagnostic and therapeutic procedures. Female hormonal factors also may play a role in the aetiology of colorectal cancer and oral contraceptive use might exert a protective effect in the descending colon.

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