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15 - years trend of mortality from cancer in population of Tomsk

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Purpose: The purpose of the study was to receive information about causes of death from cancer in persons who deceased during 1990-2005 years in Tomsk.

Methods: The study was performed as a part of international investigation "Epidemiological study of causes of dramatic fall in life expectancy in Russia in 1990-th". Russian Centers (Moscow, Tomsk, Barnaul, Byisk - prof. D.Zaridze), Centers of France (IARC, Lyon - d-rs P. Bofetta and P. Brennan) and of Great Britain (Oxford University - prof. R. Peto) are participants of the study. We used standard questionnaires for relatives of persons who deceased during 1990-2005 yrs. and data of Tomsk Statistical Bureau archives, of judicial medical commission of experts and of ZAGS bureau registrations. Criteria to enter the database were men and women deceased from cancer who lived in Tomsk.

Results: A total of 62 105 persons who died in 1990-2005 years were investigated. Total mortality during 1990-2005 varied from 889 to 1588 in men and from 509 to 784 in women per 100 000 of inhabitants being minimum value in 1990 and maximum one in 1993-1995. Total mortality in women was 2-fold lower than in men. Mortality from cancer varied from 182 (in 1990) to 240 (in 1996) and to 188 (in 2005) in men and from 135 (in 1990) to 186 (in 1998) and to 122 (in 2005) in women per 100 000 of inhabitants. In the structure of total mortality, mortality from cancer in women (17,5 % - 23,7%) took the 2-nd place and in men (15,7% - 17,4 %) took the 3-rd place. It should be noted that mortality from cancer in women was by 27% lower than in men. It is of note that mean age of deceased from cancer in Tomsk was 60 years and was by 3.6 years less than in Russia and by 13.8 years less than in Europe. The cause of this trend may be shortcomings in the diagnosis (late diagnosis) and treatment of this disease. Mortality risk from cancer was associated with smoking, alcohol, professional status and education.

Conclusion: Mortality from cancer of the Tomsk population did not decrease significantly throughout 15 years (except for 1996 and 1998 years). Mortality rate from cancer is not main cause of unfavorable demographic prognosis in Tomsk.

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Hepatitis C virus genotype 1b and hepatocellular carcinoma: a meta-analysis

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Aim of the study is to assess the association between Hepatitis C virus (HCV) genotype 1b and hepatocellular carcinoma (HCC) development through a meta-analysis of published studies.

Fifty-seven relevant papers were identified by a Medline search to December 2007. We focused this meta-analysis on the 21 studies which presented age-adjusted estimates of HCV-1b and HCC association, because the role of age as a confounder seemed crucial to exclude a possible cohort effect due to the older age of patients infected with genotype 1b. We used random effects models with the DerSimonian-Laird method to evaluate summary estimation of the overall association of HCV genotype 1b with HCC development. Heterogeneity between studies and publication bias were assessed by the Q statistic and Egger's test, respectively. Between-study heterogeneity was explored through subgroup analyses and meta-regression.

We found a significant association between HCV genotype 1b and HCC, with summary Odds Ratio (OR) and 95% Confidence Intervals (CI): 1.78 (1.36-2.32) (Table 1). Among the 8 studies including only patients with liver cirrhosis (LC), the OR (95%CI) for the association between HCV-1b and HCC was still significant, being 1.60 (1.07-2.39) (Table 1). Similar results were observed on the 36 studies presenting only crude data. We observed a significant heterogeneity between studies, mainly explained by the design of the studies ($p=0.01$) and publication year ($p<0.01$): the oldest cohort studies presented lower OR in comparison with more recent cohort studies and case-control studies. Among papers including only subjects affected by LC, the inclusion of HBV co-infected patients seemed to mainly explain the heterogeneity ($p=0.05$), accordingly the studies which excluded HBV co-infected patients provided higher OR compared with those including a subgroup of HBV co-infected patients.

In conclusion, HCV genotype 1b seems to be associated with a higher risk of HCC, especially in patients with early stage of liver disease. In patients with LC, a slightly higher risk of HCC development in HCV-1b carriers could be suggested, although it needs to be confirmed in further studies.

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Pathobiological features of breast tumours in the State of Kuwait: a comprehensive analysis

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Background and Aim: Breast cancer accounts for 30.3% of all cancer types in Kuwaiti women. Death occurs in approximately 43% of these patients. Our goal was to conduct a comprehensive analysis of the pathobiological characteristics of the tumours in an attempt to determine any particular trend that could be present.

Materials and methods: One hundred and sixty-six cases were included in this study. All the pathology reports and paraffin blocks pertaining to these cases were collected. Four micrometer sections were taken from each block, and immunostaining against Her-2, ER, and PgR was performed. Both the proportion and intensity of immunostaining were scored according to the Allred's method, and typing of the tumour was done according to the WHO criteria regarding tumour classification. Grading of invasive carcinomas was done according to the modified Bloom-Richardson-Elston's method, and tumour stage was determined according to the criteria set by the American Joint Committee on Cancer.

Results: The mean age of the patients below 55 years was 40, as compared to 68 for those above 55 ($p < 0.0001$). More than half of the cases were in the right breast, and were surgically treated by total mastectomy with axillary clearance. The majority of the tumours had irregular (stellate) margins, was invasive, and had a surrounding breast tissue of adenosis or fibrocystic type. Their mitotic index was 10-20 or >20 with a marked to moderate nuclear pleomorphism. They were mostly grade II or III, sized 2-5 or > 5 cm, had absent or scanty tumour lymphocytes, and were stage II or III. The in situ tumours were mainly ductal carcinoma (DCIS) of which comedo and cribriform were the major histological subtypes. The major histological subtypes of the invasive tumours were ductal-not otherwise specified, lobular, and tubular/cribriform. In this study, we also found a significant ($p < 0.05$) association between over expression of Her-2, lack of expression of ER and some of the characteristics mentioned above.

Conclusions: Breast cancer in Kuwait seems to be more aggressive than what is currently seen in Europe, North America, Australia, and parts of Asia. Further investigations regarding the features observed in this study need to be performed.

Table 1: Summary OR and 95%CI for the association between HCV genotypes and HCC development, and heterogeneity estimates (5-POS)

Type of controls	HCV genotype comparison	N studies (N cases/N controls)	OR (95%CI)	Q test p-value
Any HCV positive	1b/1* vs non 1b/1	21 (1408/ 6677)	1.78 (1.36-2.32)	0.10
	1b vs non 1b	17 (1128/ 5773)	2.01 (1.53-2.66)	0.06
	1b vs 2	10 (797/ 1821)	2.17 (1.50-3.15)	0.11
Liver Cirrhosis	1b/1* vs non 1b/1	8 (596/ 935)	1.60 (1.07-2.39)	0.04
	1b vs non 1b	7 (463/ 851)	1.66 (0.98-2.82)	0.03
	1b vs 2	4 (222/ 413)	1.80 (0.58-5.62)	0.01

* HCV type 1 was considered "at risk" genotype when information on HCV-1b was not available.