Occupational Cancer-1

01C.1 KEY FEATURES OF THE NEW PREAMBLE TO IARC MONOGRAPHS

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Background The Preamble to the IARC Monographs describes the objective and scope of the programme, general principles and procedures, and scientific review and evaluations. Since 1971, the Preamble has been updated periodically. In 2018 IARC convened an Advisory Group (AG) to Recommend an Update to the Preamble.

Methods In advance of the meeting IARC engaged with Governing Council members, WHO and senior IARC staff. In order to take into account scientific input from all stakeholders in a comprehensive and transparent way, IARC solicited online submission of scientific comments and presentations at a scientific webinar. Starting in September, the Advisory Group began to discuss the public comments and draft updates to the Preamble, working in subgroups. The AG then participated in a 3 day meeting held on 12–14 November 2018 in Lyon, France.

Results The updated Preamble confirms additional commitments to principles of scientific rigour, impartial evaluation, transparency, and consistency. Advancements in methods of systematic review provide a basis for enhancing transparency through more specific guidance to Working Group members. Specifically, reviews of exposure assessment quality will be integrated with human cancer studies and mechanistic data. The critical role of informed judgement by experts is an integral component of the Monograph evaluation process and reliance on standardized checklists would be counterproductive; the informativeness of each study will be explicitly considered in future Monographs. The key characteristics of carcinogens provide a framework for organizing mechanistic evidence and assessing its strength. The overall evaluation draws on the mechanistic, animal bioassay, and human evidence in a more integrated fashion. The AG recommended clarification regarding the distinction between Group 2A and Group 2B.

Conclusions This new Preamble will enable IARC to take advantage of the scientific and procedural advances and strengthens the transparent method for the identification of carcinogenic hazards, the first step in cancer prevention.

01C.2 ABSTRACT WITHDRAWN

01C.3 NIGHTSHIFT WORK AND RISK OF LYMPHOMA SUBTYPES

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Introduction In 2010, the International Agency for Research on Cancer (IARC) classified 'Shiftwork that involves circadian disruption' as a probable human carcinogen (group 2A), based on limited evidence from epidemiological studies and sufficient evidence from experimental animal studies. The epidemiological results were consistent for breast cancer. More recent publications suggested an increase in risk for ovarian and endometrial cancer, prostate cancer, and colorectal cancer.

Sleep deprivation is common in shift workers, and it leads to disruption of the transcription of genes implicated in the regulation of the immune response.

Objectives As depression of the immune system is a known risk factor for lymphomas, we explored the association between risk of lymphoma subtypes and nightshift work with a case-control study design.

Materials and methods Based on the lifetime occupational history available for 323 cases and 463 controls who participated in a case-control study on lymphoma etiology conducted in Sardinia (Italy) in 1998–2006, expert occupational physicians assessed nightshift work for each job entry of each study subject. We calculated risk of major lymphoma subtypes, namely diffuse large B cell lymphoma, follicular lymphoma, chronic lymphocytic leukemia, multiple myeloma and Hodgkin lymphoma, associated with cumulative days of nightshift work with unconditional logistic regression, adjusting by age, gender, and education.

Results None of the lymphoma subtypes we investigated showed an association with lifetime cumulative days of nightshift work. Contrary to our expectation, risk of all lymphomas combined tended to decrease with cumulative days of nightshift work.

Conclusions Further studies are warranted to investigate in more detail whether sleep deprivation resulting from nightshift work might be implicated in lymphomagenesis. Future investigations should include information on the chronotype of study subjects, the specific shift rotation schedule applied in each workplace, usual hours of sleep per day, and occurrence of daytime sleepiness.

01C.4 CANCER INCIDENCE AMONG LEAD-EXPOSED WORKERS IN TWO COUNTRIES

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Introduction Inorganic lead is considered a probable carcinogen by IARC (brain, lung, and stomach).

Methods We conducted internal analyses via Cox regression of cancer incidence in two cohorts of lead-exposed workers with blood lead data (Finland, UK), including almost 30 000 workers (20 752 in Finland and 9122 in the UK) and over 10 000 incident cancers. Our exposure metric was maximum annual blood lead (BL) test.

Results The combined cohort had a median maximum blood lead of 29 ug/dl, a mean first year BL test of 1977, and was 87% male. Forty-seven percent had more than 1 BL test. Significant ($p < 0.05$) positive trends, using the log of each