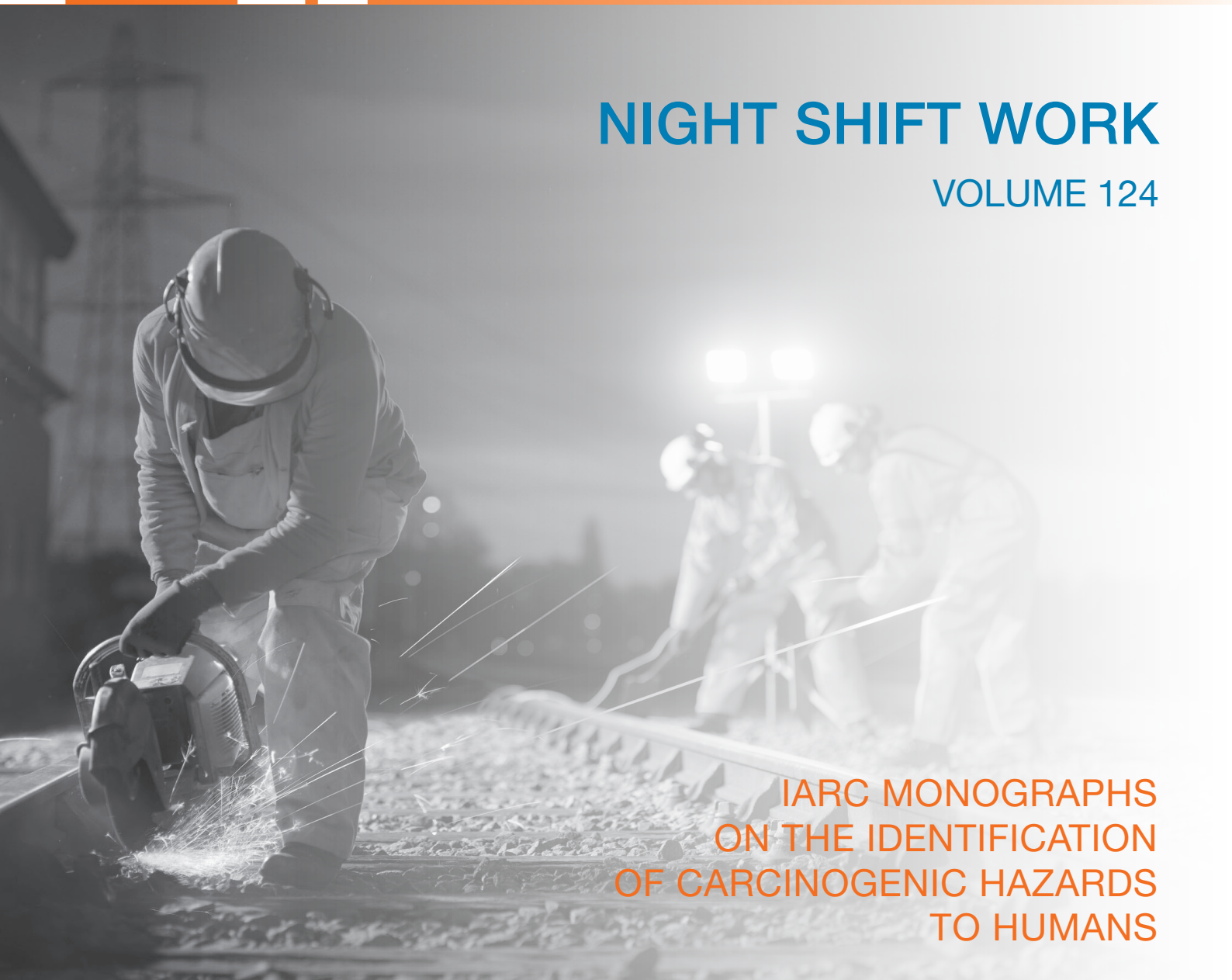


## NIGHT SHIFT WORK

VOLUME 124

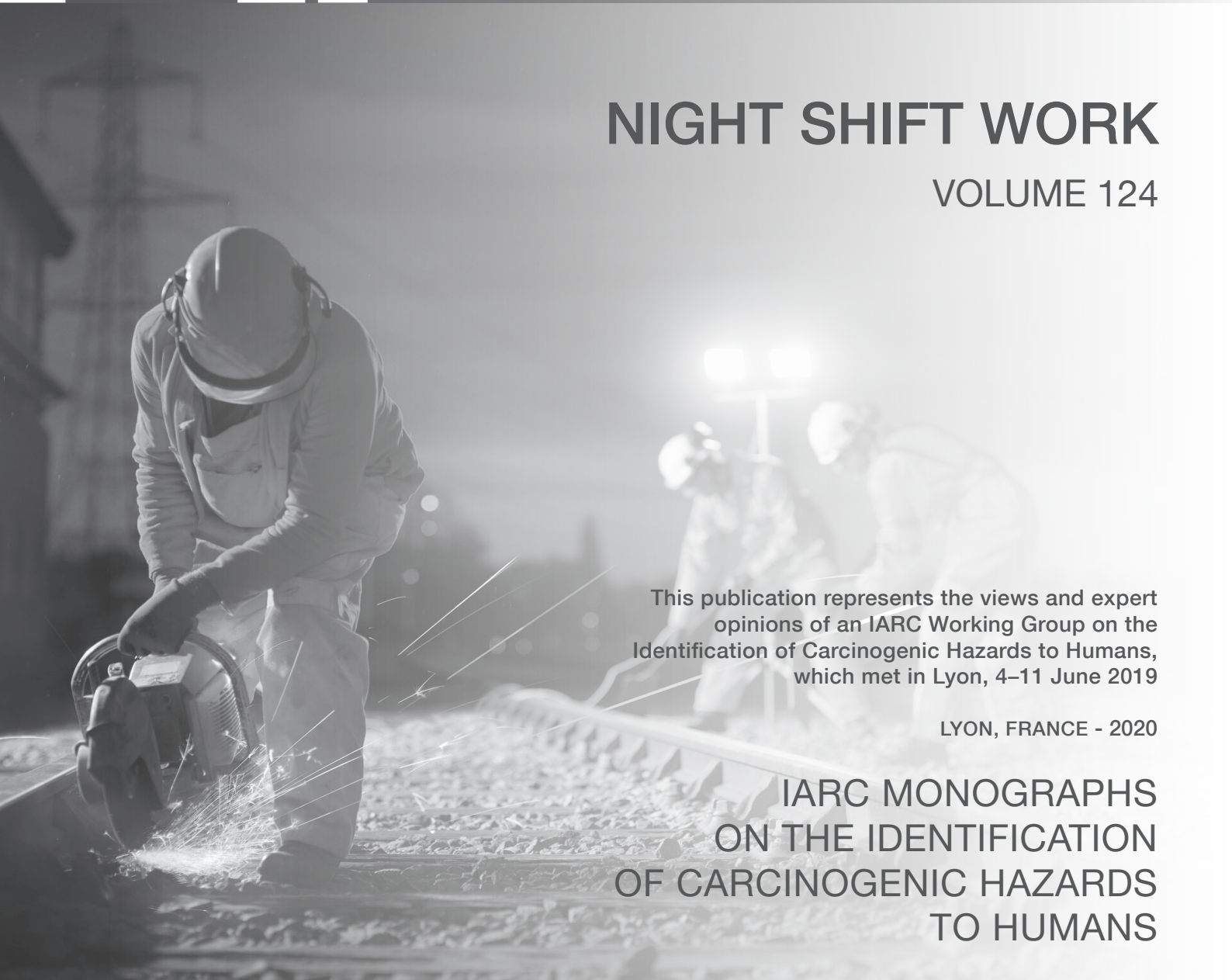


IARC MONOGRAPHS  
ON THE IDENTIFICATION  
OF CARCINOGENIC HAZARDS  
TO HUMANS



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VOLUME 124



This publication represents the views and expert opinions of an IARC Working Group on the Identification of Carcinogenic Hazards to Humans, which met in Lyon, 4–11 June 2019

LYON, FRANCE - 2020

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## IARC MONOGRAPHS

In 1969, the International Agency for Research on Cancer (IARC) initiated a programme on the evaluation of the carcinogenic hazard of chemicals to humans, involving the production of critically evaluated monographs on individual chemicals. The programme was subsequently expanded to include evaluations of carcinogenic hazards associated with exposures to complex mixtures, lifestyle factors and biological and physical agents, as well as those in specific occupations. The objective of the programme is to elaborate and publish in the form of monographs critical reviews of data on carcinogenicity for agents to which humans are known to be exposed and on specific exposure situations; to evaluate these data in terms of cancer hazard to humans with the help of international working groups of experts in carcinogenesis and related fields; and to identify gaps in evidence. The lists of IARC evaluations are regularly updated and are available on the internet at <http://monographs.iarc.fr/>.

This programme has been supported since 1982 by Cooperative Agreement U01 CA33193 with the United States National Cancer Institute, Department of Health and Human Services. Additional support has been provided since 1986 by the European Commission Directorate-General for Employment, Social Affairs, and Inclusion, initially by the Unit of Health, Safety and Hygiene at Work, and since 2014 by the European Union Programme for Employment and Social Innovation “EaSI” (2014–2020) (for further information please consult: <http://ec.europa.eu/social/easi>). Support has also been provided since 1992 by the United States National Institute of Environmental Health Sciences, Department of Health and Human Services. The contents of this volume are solely the responsibility of the Working Group and do not necessarily represent the official views of the United States National Cancer Institute, the United States National Institute of Environmental Health Sciences, the United States Department of Health and Human Services, or the European Commission.

Published by the International Agency for Research on Cancer,  
150 cours Albert Thomas, 69372 Lyon Cedex 08, France  
©International Agency for Research on Cancer, 2020  
Online publication, June 2020

Distributed by WHO Press, World Health Organization, 20 Avenue Appia, 1211 Geneva 27, Switzerland  
(tel.: +41 22 791 3264; fax: +41 22 791 4857; email: [bookorders@who.int](mailto:bookorders@who.int)).

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Co-funded by the European Union

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### Library of Congress Cataloguing-in-Publication Data

Names: IARC Working Group on the Identification of Carcinogenic Hazards to Humans.

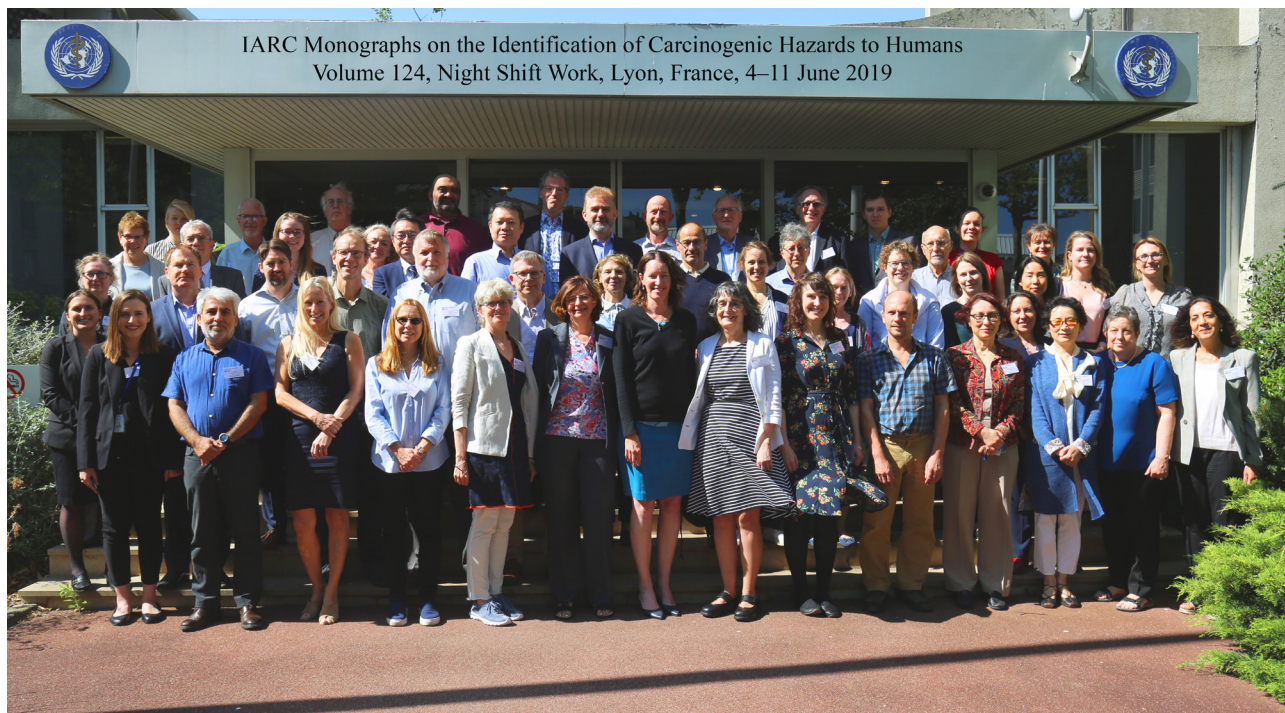
Title: Night Shift Work.

Description: Lyon : International Agency for Research on Cancer, 2020. | Series: IARC monographs on the identification of carcinogenic hazards to humans, ISSN 1017-1606 ; v. 124. | “This publication represents the views and expert opinions of an IARC Working Group on the Identification of Carcinogenic Hazards to Humans, which met in Lyon, 4–11 June 2019.” | Includes bibliographical references.

Identifiers: ISBN 9789283201625 (pbk.) | ISBN 9789283201915 (ebook)

Subjects: MESH: Carcinogens. | Shift Work Schedule | Occupational Exposure--adverse effects. | Risk Factors

Classification: NLM W1



“Night shift work” involves work, including transmeridian travel, that occurs during the regular sleeping hours of the general population. This alters exposure to the natural light–dark schedule and disrupts circadian rhythms.

About the cover: the image depicts night shift workers performing maintenance on a railway track.

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How to cite: IARC (2020). Night shift work. *IARC Monogr Identif Carcinog Hazards Hum*, 124:1–371.



This volume of the *IARC Monographs* provides an evaluation of the carcinogenicity of night shift work, that is, work occurring during the regular sleeping hours of the general population. Globally, an estimated one out of five workers is engaged in regular night shift work, with percentages increasing over time in some countries. Night shift work is most common in the following industry sectors: transportation (for example, aircrew and truck drivers on long-haul trips), health care, manufacturing, and services (for example, social assistance, accommodation and food services, information and communications, travel and tourism).

An *IARC Monographs* Working Group reviewed studies of cancer in people exposed to night shift work (including transmeridian air travel), studies of cancer in experimental animals exposed to shifts in the light-dark schedule, and mechanistic evidence in both exposed humans and experimental systems. The review of the present Working Group was the first to be guided by the amended Preamble to the *IARC Monographs*, which was substantially updated in 2019.

