early kidney injury, supporting separate initiating and exacerbating factors. Further investigating episodes of early kidney injury will facilitate efforts to uncover the initiating factor. Meanwhile interventions to reduce the impact of exacerbating factors should be vigorously pursued.

Radiation

O-136 NEW RESEARCH ON THE CONTINUED HEALTH BURDENS OF URANIUM MINERS: IMPLICATIONS FOR WORKERS COMPENSATION IN THE UNITED STATES

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Introduction The US Radiation Exposure Compensation Act (RECA) provides compensation to some workers whose health was affected by uranium industry employment. Originally scheduled to terminate in 2022, the US government recently extended RECA benefits for two more years. Another RECA amendment proposes to extend the deadline further, defines additional compensable diseases, and expands eligibility to more contemporary uranium miners.

Materials and Methods Researchers at NIOSH conduct extended follow-up on the cohort of US Colorado Plateau uranium miners, and participate in the international Pooled Uranium Miners Analysis (PUMA). Here we apply our recent research findings from both studies to contextualize the health burdens faced by surviving uranium miners, and examine how our research findings relate to the proposed extension and expansion of RECA.

Results Former US uranium miners die of silicosis (Standardized Mortality Ratio (SMR)=41.4; 95%CI:30.9–54.3), pneumoconiosis (SMR=39.6; 95%CI:29.3–52.3), idiopathic pulmonary fibrosis (SMR=4.8; 95%CI:3.7–6.1), and lung cancer (SMR=4.5; 95%CI:4.2–4.9) at higher rates than expected. These mortality excesses continue to be observed in recent calendar years. In the PUMA study, uranium miners had higher rates of lung, liver, larynx, stomach, and pleural cancers than expected, and miners hired in later periods also had higher rates of lung and stomach cancer than expected. A positive association between radon exposure and lung cancer mortality is seen in the full PUMA cohort as well as in the sub-cohort of more contemporary miners.

Conclusions Recent analyses suggest there be more US uranium miners who develop compensable diseases after the planned termination of RECA benefits in 2024. Uranium miners die at elevated rates from several cancer types that are not currently compensable. Contemporary uranium miners who are ineligible for compensation due to their employment dates experience many of the same health hazards as early-period miners. The proposed amendments to RECA are generally consistent with recent scientific results.

COVID 19

O-148 DIFFERENCES AND SIMILARITIES OF OCCUPATIONAL RISK FACTORS FOR COVID-19 ACROSS WAVES OF THE PANDEMIC; EXTENDED FOLLOW-UP OF THE COVICAT COHORT

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Introduction During the first pandemic lockdown in Spain certain workers have been at increased risk of COVID-19. Results from published studies are heterogeneous, possibly due to differences in public health interventions, availability of personal protective equipment (PPE), virulence of variants of concern, population-wide immunity or methodological issues.

Methods The COVICAT study (IEC approved) pooled ongoing population-based cohort studies from Catalonia. Occupational analyses of COVICAT were restricted to working age and included 8,422 participants, of which 3,563 were tested for SARS-CoV-2 antibodies during the first wave; study participants were re-contacted in mid-2021. Participants responded to a web-based or telephone survey including questions on socio-demographics, pre-pandemic health, behavioural and environmental risk factors. Occupational questions covered mode of work, job title, PPE, and mode of commuting. COVID-19 cases were defined by self-reported symptoms or hospitalisation and SARS CoV-2 seropositivity. Association of type of work, job titles and job-exposure matrix (JEM) with COVID-19 was assed using log-binomial models adjusted for potential confounders, such as age, sex, education, deprivation index, population density and survey type. Analyses for the extended follow-up were stratified by pandemic waves.

Results The relative risk (RR) for COVID-19 for working at the usual workplace compared to telework was 1.83 (95% CI: 1.41, 2.38), and 1.63 (95% CI: 1.05, 2.52) among the serology study participants. The RR by job title was increased for all health care workers and highest for personal health care workers in health services (6.19; 3.71, 10.33); PPE was associated with a stronger protective effect by increasing protection level. Using public transport for commuting was associated with a 50% increase in COVID risk. Results for the extended follow-up will be presented.

Conclusions The extended follow-up of the COVICAT cohort provides data to illuminate occupational risk factors for COVID-19 infection over time, which may contribute to explain heterogeneities across countries.