studies examining the relationship between cannabis use and workplace injury have yielded mixed findings, likely due to methodological shortcomings, including cross-sectional study designs and broad measures of exposure that lack consideration for timing of use. Using data from a national longitudinal study of Canadian workers, the objective was to examine the relationship between cannabis use, including workplace use, and the risk of workplace injury.

**Materials and Methods** Surveys were conducted yearly from 2018 to 2020. Two exposures were examined: 1) general cannabis use (never, former, past-year) and past-year workplace cannabis use (no use, non-workplace use, workplace use), with workplace use referring to use two hours before work, use during work and/or use during breaks. The outcome was past-year workplace injury (yes/no). Participants ining adjacent surveys were included in analyses (n=2,745). Relative risks (RR) and 95% confidence intervals (CIs) were estimated between each exposure and workplace injury, using exposures measured at the survey immediately preceding the outcome. Models were adjusted for various sociodemographic, health, and work variables.

**Results** When examining general cannabis use, compared to never use, no relationship was seen for former use (RR 1.09, 95%CI 0.84–1.42), while past-year use was associated with a 30% increased risk of workplace injury (95%CI 0.99 –1.72). When examining workplace cannabis use, compared to no past-year use, there was no difference in risk of workplace injury for past-year non-workplace use (RR 1.11, 95%CI 0.87–1.41). However, workers reporting past-year workplace use were at an almost two-fold increased risk of experiencing a workplace injury (RR 1.86, 95%CI 1.30–2.66).

**Conclusions** It is important to distinguish non-workplace and workplace use when considering workplace safety impacts of cannabis use.

**Exposure assessment**

**0-134 EXPOSURE ASSESSMENT FOR SUB-CONCUSSIVE HEAD IMPACTS AMONG FORMER ENGLISH PROFESSIONAL FOOTBALL PLAYERS: RESULTS FROM THE HEADING STUDY**

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**Objective** To develop exposure estimates for sub-concussive head impacts (SCHI) for use in retrospective epidemiological studies among former professional association football players.

**Methods** Playing and heading history data were available from questionnaires of ex-professional association football players (n=163) participating in the Health and Ageing Data in the Game of football (HEADING) study (https://www.lshim.ac.uk/research/centres-projects-groups/heading-study). We use linear mixed effect regression to model the number of headers and other head impacts as a function of potential exposure affecting factors including decade of play (playing position, level of play, league) and context of event (games vs training). Models are elaborated with player identifier as the random effect and potential exposure affecting factors as the fixed effects. Model selection is based on a stepwise approach.

**Results** Results from models based on 1463 observations representing individual playing periods defined by club and decade of play suggest the number of head impacts to differ significantly between playing positions, event context, decades and level of play. Number of head impacts was higher among defenders and utility players when compared with players in other positions. Professional play was also associated with an increased number of head impacts compared to apprentice, amateur and semi-professional play, with the average number of reported head impacts declining throughout the observation period (1949–2015). The model explained 40% of the total variability in reported number of head impacts.

**Conclusion** Currently further models for blows and head-to-head collisions are being developed. Validation exercises including comparisons of bias and precision against observations not included in the modelling processes are also underway. At the conference we will report the results of the final models alongside those of the validation exercises. The model results will be used to estimate cumulative exposure to SCHI in epidemiological studies of former association football players.

**Carcinogens/Cancer**

**0-135 EXPLORING THE ETIOLOGY OF RARE CANCERS USING A LARGE MULTI-ORE MINING COHORT**

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**Introduction** Cohort studies may be limited in their ability to investigate rare cancers because of their size, length of follow-up, or access to cancer registry data. This study examines exposure patterns for nasal, nasopharyngeal, laryngeal, salivary gland, and bone cancer using a large multi-ore mining cohort.

**Materials & Methods** From 1928–1988 underground miners in Ontario, a region where gold, uranium, nickel, and other ores are mined, were required to undergo an annual medical exam, and record their mining work history to receive certification. These data were used to create the Mining Master File (MMF) cohort. Cancers were identified through linkage with the Ontario Cancer Registry (1964–2017). Cancer risk among miners was compared to the general population using Standardized Incidence Ratios (SIR) and between groups of miners in the cohort using Poisson regression.

**Results** The cohort consisted of 61,397 male miners. Nasal cancer was somewhat elevated (48 cases, SIR=1.44, 95% confidence Interval (CI)=1.06–1.91) but the observed excess...