also compared across studies to ensure that any differences in these estimates were justified. Statistical analyses employed conditional logistic regression models with flexible penalised cubic regression spline components.

**Results** Updates identified 170 additional cases giving a total of 370, sufficient for separate analyses by leukaemia subtypes, myelodysplastic syndrome (MDS), and myeloproliferative disease (MPD). Review of source records by pathologists resulted in changes to the underlying disease subtypes for certain leukemia cases; pre-existing diseases such as MDS were identified; secondary polycythemia cases were identified and excluded. Risks for acute myeloid leukemia (AML) tended to increase as categorical benzene exposure increased when pooling the original data from the previously published studies using both the original and revised exposure assessment. Dose-response results from the updated pooled data for MDS, MPD, AML and chronic myeloid leukemia, and chronic lymphoid leukemia will be presented from the updated dataset.

**Conclusions** This pooled study benefited from careful reconsideration of benzene exposure estimates and disease classification procedures, improving the precision of risk estimates of benzene exposure for leukemia and other disease subtypes.

## 113 LYMPHOHAEMATOPOIETIC CANCERS AND BENZENE: A POOLED ANALYSIS OF PETROLEUM WORKERS

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**Objectives** There are few quantitative studies on the effect of relatively low benzene concentrations on risks of specific lymphohaematopoietic cancer subtypes. Three nested case-control studies among petroleum workers in Australia, Canada and the UK have been updated and pooled to provide greater precision.

**Methods** To improve disease subtype classification, pathology records were obtained; two pathologists reviewed these and classified every case according to traditional and WHO classification schemes. Quantitative exposure estimates were