An international ad hoc Working Group of experts in cancer research met at the International Agency for Research on Cancer (IARC) in January 1979 to evaluate the data on human and experimental animal carcinogenicity for 54 chemicals, groups of chemicals, and industrial processes. Monographs for these chemicals were published in Volumes 1-20 of the IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans. On the basis of evidence from human studies, 18 of the 54 chemicals and industrial processes are human carcinogens. A further 18 chemicals are probably carcinogenic for humans, although the data were considered not adequate to establish a causal association. To reflect differing degrees of evidence of carcinogenicity within this group, it was further subdivided; for six chemicals there was a high degree of evidence, and for 12 there was a lower degree. Data on the remaining 18 chemicals were considered insufficient to allow any evaluation of carcinogenicity. The report summarizes the background, purpose, and overall conclusions of the Working Group. The evidence supporting the evaluations is given in the Appendix.

This volume includes a cumulative index of chemicals for Volumes 1-20 of the IARC Monographs, as well as an index by possible target organ in humans. A condensed version of this report will appear in the December 1979 issue of Cancer Research.