

Table of contents

Contributors	ix
Acknowledgements	xiii
Abbreviations	xv
Foreword	xvii
Preface	1
Chapter 1. The role of epidemiology in cancer hazard identification by the <i>IARC Monographs</i> programme	5
1.1 Overview of cancer hazard identification in the <i>IARC Monographs</i> programme	6
1.2 Methods for evaluating human cancer studies in cancer hazard identification	9
1.3 Examples of current approaches to bias consideration in <i>IARC Monographs</i> evaluations	12
1.4 Minimizing conflicts of interest in cancer hazard identification	15
1.5 False-positives and false-negatives in cancer hazard identification: the <i>IARC Monographs</i> experience over more than 50 years	16
1.6 Conclusion	19
References	21
Chapter 2. Causal diagrams to evaluate sources of bias	23
2.1 Introduction	24
2.2 Causal DAGs to evaluate sources of bias	24
2.3 Example: building a DAG for opium consumption and lung cancer	39
2.4 DAGs and specific sources of bias	41
2.5 DAGs and multiple sources of bias	51
2.6 Signed DAGs	53
2.7 Use of DAGs in evidence synthesis	56
2.8 Summary	57
References	60

Chapter 3. Confounding: a routine concern in the interpretation of epidemiological studies	63
3.1 Introduction	64
3.2 Evaluating control for confounding	65
3.3 Tools for assessing bias due to confounding	73
3.4 Summary	82
References	84
 Chapter 4. Information bias: misclassification and mismeasurement of exposure and outcome	 87
4.1 Introduction	88
4.2 Qualitative evaluation of the direction of bias due to errors in exposures	90
4.3 Tools for quantifying bias due to errors in exposure	100
4.4 Outcome misclassification	110
4.5 Summary	116
References	119
 Chapter 5. Selection bias and other miscellaneous biases	 123
5.1 Introduction	124
5.2 Identifying selection bias in cohort studies	125
5.3 Identifying selection bias in case–control studies	132
5.4 Tools for assessing and adjusting for selection bias	139
5.5 Other miscellaneous biases	149
5.6 Summary	154
References	155
 Chapter 6. Incorporating bias assessments into evidence synthesis	 159
6.1 Introduction	160
6.2 Frameworks for incorporating bias assessment into evidence synthesis	161
6.3 Developing the bias-review process	162
6.4 Methods for studying multiple biases	167
6.5 Summary	172
References	173
 Chapter 7. Study reporting considerations to facilitate quantitative bias assessment with access to original data	 175
7.1 Introduction	176
7.2 Reporting considerations to aid graphical approaches to identify biases	177
7.3 Confounding	179
7.4 Information bias due to exposure and outcome misclassification	184
7.5 Selection bias	189
7.6 Conclusions	199
References	200
 Annex 1. Evolution of the <i>IARC Monographs</i> Preamble from early investigations and reviews in the 1960s until the present day	 203
A1.1 The beginnings: cancer in occupational groups	204
A1.2 Tobacco smoking and the emergence of new epidemiological methods	204
A1.3 1972: the first <i>IARC Monographs</i>	205
A1.4 1972–1980: <i>IARC Monographs</i> Volume 17 and Supplement 1	206
A1.5 1981–1990: <i>IARC Monographs</i> Supplements 4 and 7	206

A1.6 1991–2010.....	207
A1.7 2011 until today	207
References.....	208
Annex 2. Examples for which worked spreadsheets or R code are provided	211
Annex 3. Incorporating bias assessments into evidence synthesis.....	213
A3.1 Multiple-bias analysis: worked examples	214
A3.2 Overview of multiple-bias analysis of the data of Aliramaji et al. (2015) using pseudo-data and bias-factor approaches	217
A3.3 Sensitivity analysis	226
A3.4 A potential probabilistic multiple-bias analysis strategy	226
References.....	228
Index of examples.....	229
Index of tools	241
Disclosures of interests.....	243

