A Working Group of 29 independent experts from 16 countries, convened by the International Agency for Research on Cancer (IARC) in November 2014, reviewed the scientific evidence and assessed the cancer-preventive and adverse effects of various methods of screening for breast cancer. This publication provides an important update of the landmark 2002 IARC Handbook on Breast Cancer Screening, in light of recent improvements in treatment outcomes for late-stage breast cancer and recent data on the effectiveness of organized screening programmes. The Working Group also considered non-mammographic imaging techniques, clinical breast examination, and breast self-examination.