In addition to the present report, several background papers were prepared in conjunction with OTA'S assessment The Implications of Cost-Effectiveness Analysis of Medical Technology, and these are available separately. The findings and options of the assessment are in large part derived from the information generated by the background efforts.

Background Paper #1: Methodological Issues and L.iterature Review, includes an in-depth examination of the decisionmaking context and methodology discussions presented in this report. A critique of the literature, a bibliography of over 600 items, and abstracts of over 70 studies and other articles are also included.

In order to investigate the applicability of techniques to assess the costs and benefits of medical technology, 19 case studies were prepared. All 19 are available individually. In addition, 17 of the cases are available in a collected volume, Background Paper #2: Case Studies of Medical Technologies. Some of the cases represent formal cost-effectiveness analysis (e.g., the case on bone marrow transplants), while others represent net cost or "least cost" analysis (e.g., the case on certain respiratory therapies). Other cases illustrate various issues such as the difficulty of conducting cost-effectiveness analysis in the absence of adequate efficacy and safety information (e.g., the case on breast cancer surgery), or the role and impact of formal analysis on policymaking (e.g., the case on end-stage renal disease interventions). The 17 case studies in Background Paper #2 and their authors are:

Artificial Heart Deborah P. Lubeck John P. Bunker Automated Multichannel Chemistry Analyzers Milton C, Weinstein Laurie A. Pearlman **Bone Marrow Transplants** Stuart O. Schweitzer C. C. Scalzi Breast Cancer Surgery Karen Schachter Duncan Neuhauser Cardiac Radionuclide Imaging William B. Stason **Eric Fortess Cervical Cancer Screening** Bryan R. Luce

Cimetidine and Peptic Ulcer Disease Harvey V. Fineberg Laurie A. Pearlman Colon Cancer Screening David M. Eddy CT Scanning Judith L. Wagner **Elective Hysterectomy** Carol Korenbrot Ann B. Flood Michael Higgins Noralou Roos John P. Bunker **End-Stage Renal Disease Interventions Richard A. Rettig** Gastrointestinal Endoscopy Jonathan A, Showstack Steven A. Schroeder Neonatal Intensive Care Peter Budetti Peggy McManus Nancy Barrand Lu Ann Heinen **Nurse Practitioners** Lauren LeRoy Sharon Solkowitz Orthopedic Joint Prosthetic Implants Judith D. Bentkover Philip G. Drew Periodontal Disease Interventions **Richard M. Scheffler** Sheldon Rovin **Selected Respiratory Therapies** Richard M. Scheffler Morgan Delaney

The 18th case study is published separately as Background Paper #3: The Efficacy and Cost-Effectiveness of Psychotherapy. That study assesses methodological and substantive issues relating to the scope of psychotherapy, the evaluation of psychotherapeutic efficacy, and the applicability of cost-effectiveness and cost-benefit analysis in assessing psychotherapy. It was prepared by Leonard Saxe on the basis of a report prepared for OTA by Brian Yates and Frederick Newman. The 19th case study was prepared for OTA by Judith Wagner and is published separately as Background Paper #5: Assessment of Four Common X-Ray Procedures,

Background Paper #4: The Management of Health Care Technology in Ten Countries is an analysis of the policies, programs, and methods, including costeffectiveness and cost-benefit techniques, that nine industrialized nations other than the United States use to manage the effects of medical technology. The experience of these nine countries in managing medical technology is compared to that of the United States. The paper on the United States and the comparative analysis were prepared by OTA staff, assisted by Louise Russell. The authors of the papers on the nine foreign countries are: United Kingdom Barbara Stocking Canada

Jack Needleman Australia Sydney Sax Japan Joel Broida France Rebecca Fuhrer Germany Karin A. Dumbaugh Netherlands L. M. J. Groot Iceland David Gunnarson Duncan vB. Neuhauser Sweden Erik H. G. Gaensler Egon Jonsson Duncan vB. Neuhauser

A related report prepared by OTA and reviewed by the Advisory Panel to the overall assessment is A Review of Selected Federal Vaccine and immunization Policies. That study, published in September of 1979, examined vaccine research, development, and production; vaccine efficacy, safety, and cost-effectiveness; liability issues; and factors affecting the use of vaccines. Pneumococcal vaccine was used as a case study, and a cost-effectiveness analysis was performed.