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Nota di contenuto	Section I. Introduction, Peter J. Krause -- 1. Introduction to Immunology, Epidemiology, and Immunoepidemiology -- Section II. Immunology Basics: Immunology of the Individual, Paula B. Kavathas -- 2. Organization and Cells of the Immune System -- 3. Innate Immunity: Recognition and Effector Functions -- 4. Adaptive Immunity: Antigen Recognition by T and B Lymphocytes -- 5. Adaptive Immunity: Effector Functions, Regulation, and Vaccination -- 6. Disorders of the Immune System -- Section III. Immunoepidemiology Basics: Immunology of Populations, Nancy H. Ruddle -- 7. Immunoepidemiology of Selected Components of the Innate and Adaptive Immune Systems -- 8. Immunoepidemiology of Immune Dysfunction -- Section IV: Immunoepidemiology of Infectious Diseases and Cancer, Peter J. Krause -- 9. Immunoepidemiology of Mycobacterium tuberculosis -- 10.

Immunoepidemiology of Human Immunodeficiency -- 11. Fungal Immunoepidemiology -- 12. Immunoepidemiology of Plasmodium falciparum malaria -- 13. Immunoepidemiology of Cancer -- Section V. Immunoepidemiologic Investigative, Therapeutic, and Preventative Tools, Nancy H. Ruddle -- 14. Modeling Approaches Toward Understanding Infectious Disease Transmission -- 15. Vaccines -- 16. Immunotherapy for Infectious Diseases, Cancer, and Autoimmunity -- Appendix -- .

Sommario/riassunto

This textbook focuses on the nascent field of Immunoepidemiology that addresses how differences in immune responses among individuals affect the epidemiology of infectious diseases, cancer, hypersensitivity, and autoimmunity. The idea for the book originated from a course entitled “Immunology for Epidemiologists” at the Yale School of Public Health. While many fine textbooks are available that address the immunological responses of individuals to pathogens, these provided very little information regarding how immunological variation among populations affects the epidemiology of disease. And yet, it has long been recognized that there is great immunologic diversity among people, which can have a profound effect on the epidemiology of disease. Careful review of the immunologic and epidemiologic literature revealed that there have been relatively few publications concerning immunoepidemiology and that no textbook is available on the subject. This textbook therefore aims to fill this void by providing a much-needed tool to comprehensively and efficiently teach immunoepidemiology. The book includes a section on the basic principles of immunology, and then applies them to particular examples of disease in human populations. The target audience for this text book are Masters of Public Health students. Others who should also find it of interest include PhD students in epidemiology, immunology, medical students, generalists, and specialists in immunology, infectious diseases, cancer, and rheumatology. Peter J. Krause, M.D. is a physician-scientist whose research focuses on tick-borne infections, especially human babesiosis, *Borrelia miyamotoi* infection, and Lyme disease. He received his MD at Tufts University School of Medicine, completed post-medical school training at Yale, Stanford, and UCLA, was a Professor of Pediatrics at the University of Connecticut School of Medicine, and is currently a Senior Research Scientist at the Yale School of Public Health and Yale School of Medicine where he teaches “Immunology for Epidemiologists”. Paula B. Kavathas, Ph.D. is an immunologist whose research focuses on CD8 T cell immunity and immunotherapy. She received her Ph.D. in Genetics from the University of Wisconsin, was a postdoctoral fellow at Stanford University and is currently Professor of Laboratory Medicine and Immunobiology at Yale University School of Medicine where she teaches a popular Yale College undergraduate course “Immunity and Contagion”. Nancy H. Ruddle, Ph.D. is an immunologist with a particular interest in cytokines and inflammation as they relate to autoimmunity and lymphoid organ development. She received her Ph.D. and did postdoctoral training at Yale University where she is a Professor at Yale School of Public Health. She developed the first Yale course , “Immunology for Epidemiologists” and taught it for more than 35 years.
