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Titolo	Evidence and Hypothesis in Clinical Medical Science / / by John Alexander Pinkston
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ISBN	3-030-44270-5
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (xiii, 152 pages)
Collana	Synthese Library, Studies in Epistemology, Logic, Methodology, and Philosophy of Science, , 0166-6991 ; ; 426
Disciplina	610.1
Soggetti	Medicine—Philosophy Research—Moral and ethical aspects Medical ethics Cancer - Research Philosophy of Medicine Research Ethics Theory of Medicine/Bioethics Cancer Research
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	1. Introduction -- 2. Theories of Confirmation in which Hypotheses do not have Probabilities -- 3. Theories of Confirmation in which Hypotheses have Probabilities, and Inference to the Best Explanation -- 4. Confirmation of Hypotheses in Clinical Medical Science -- 5. A Weight of Evidence Account -- 6. The Weight of Evidence Account Defended -- 7. Justification for the Hierarchical Pyramid of Evidence-Based Medicine and a Defense of Randomization -- 8. Ethics and Evidence: Is Evidence from Randomized Controlled Trials Necessary to Firmly Establish a New Therapy? -- Index.
Sommario/riassunto	In this book, the author argues that no current philosophical theory of evidence in clinical medical science is adequate. None can accurately explain the way evidence is gathered and used to confirm hypotheses. To correct this, he proposes a new approach called the weight of evidence account. This innovative method supplies a satisfactory

explanation and rationale for the “hierarchical pyramid” of evidence–based medicine, with randomized clinical trials and their derivatives, meta-analyses, and systematic reviews of randomized clinical trials at the top and case reports, case series, expert opinion, and the like at the bottom. The author illustrates the development of various “levels” of evidence by considering the evolution of less invasive surgical treatments for early breast cancer. He shows that the weight of evidence account explains the notion of levels of evidence and other efforts to rank them. In addition, he presents a defense of randomization as a method to maximize accuracy in the conduct of clinical trials. The title also considers ethical issues surrounding experimentation with medical therapies in human subjects. It illustrates and discusses these issues in studies of respiratory therapies in neonates and treatment for certain cancers in adults. The author shows that in many cases sufficient evidence can be accrued to warrant generally accepted new therapies without the need for evidence derived from randomized clinical trials.