

Priya Hays, M.S., Ph.D.

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Summary:

• **Two Pending Provisional Patent Applications**

• [Google Scholar Page](#)

- Member of Regulatory Affairs Professional Society (2022) completing training in regulatory writing for clinical trial submissions and protocols, medical devices and pharmaceuticals and regulatory compliance.
- Completed Big Data Executive Education Program at California State East Bay, with courses on data analytics, data processing, machine learning/artificial intelligence and big data solutions in July 2022.
- Freelance Medical Writer for over fifteen years with extensive academic publication record writing, editing and submitting peer-reviewed journal articles and publishing books on personalized medicine, precision oncology, pharmacogenomics, and genomic medicine and presenting abstracts, posters, and presentations at scientific and medical conferences adhering to publisher, journal and conference guidelines.
- Wrote a 745-page monograph on precision medicine, a medical book for physicians and scientists and patient advocacy to treat cancer and other diseases, entitled *Advancing Healthcare Through Personalized Medicine, Second Edition*, published by Springer Nature in September 2021.
- Served as Editor for Cancer Immunotherapies edited collection in the Cancer Treatment and Research series published by Springer Nature in March 2022.
- Completed three-year Postdoctoral Research Fellowship in Division of Hematology/Oncology, Department of Medicine, Dartmouth Medical School, Hanover, NH from 2005-2008.
- Doctorate in Literature with emphasis on Scientific Writing; Dissertation: *Molecular Biology in Narrative Form*.
- Professional & Experienced Technical Writer with sound experience in writing US-In Vitro Diagnostic (US-IVD), European Regulatory Mark (CE-IVD), and Research Use Only (RUO) Food and Drug Administration (FDA) regulatory submissions, label updates, package inserts, user manuals, and procedures for in vitro diagnostic suite of products, including assays and instruments for medical device companies.
- Earned Certificate in Technical Writing and Communication in 2019 with courses on developing documentation deliverables from project inception to implementation and writing user-friendly documents that meet audience needs.
- Cross-functional collaboration with Regulatory, Marketing, Clinical Affairs, Engineering, Virology, Oncology, Research and Development and Product Management under FDA and CE regulatory requirements.
- Generated innovative ideas for technical publication teams such as the implementation of structured authoring platforms for Cepheid and Adobe FrameMaker for Personalis.
- Wrote user manuals, product inserts and quick reference cards on Ion Torrent products using XML/DITA (extensive mark-up language/Darwin Information Typing Architecture). Wrote library prep user manuals for the Ion Proton and Ion Personal Genome Machine, products designed to sequence the human genome.
- Wrote regulatory compliance materials for vision management instruments using unstructured Adobe FrameMaker 2017, as well as became expert at unstructured Adobe FrameMaker to write documentation on time.
- Created GeneXpert Omni User Manual in XML (extensive mark-up language) for mobile device publication, as well as used Adobe FrameMaker, Photoshop and Illustrator as desktop publishing software.
- Used information from various subject matter experts ranging from Mechanical and Systems Engineering, Software Engineering, Electrical Engineering to Regulatory to write service manuals and updated product manuals for launches.
- Wrote Standard Operating Procedures (SOPs) surrounding technical publications processes, as well as solved document management issues that enabled launching on time.
- High degree of familiarity with quality systems and ISO (International Standards of Harmonization) standards.

EDUCATION

Harvard Medical School, Boston, MA

Certificate, Training to Teach in Medicine

2023

California State East Bay, Hayward, CA

Certificate, Big Data

2022

University of California, Santa Cruz, CA

Certificate, Technical Writing and Communication

2019

Immunology

2017

Molecular Diagnostics

2015

University of California, San Diego, La Jolla, CA

2005

Doctor of Philosophy (Ph.D.) Literature

University of California, Davis, Davis, CA

1999

Masters of Science in Genetics

Dartmouth College, Hanover, NH

Bachelor of Arts *cum laude*

Double-major in Biochemistry and Comparative Literature

ELECTIONS

American Association of Immunologists

2023

Regular Member

Personalized Medicine Coalition

2023

Strategic Partner

California State East Bay Continuing Education Big Data Program

2021

Advisory Council Member

American College of Medical Genetics and Genomics

2019

Affiliate Member

Society for Immunotherapy of Cancer

2019

Member

American Society of Clinical Oncology

2018

Physician/Scientist

CONTINUING EDUCATION CREDITS

- 14.0 AMA PRA Category 1 Credits™, Harvard Medical School Training to Teach in Medicine Program
- 32.25 AMA PRA Category 1 Credits™ 2023 Harvard Medical School, Innovations in Internal Medicine
- 15.00 AMA PRA Category 1 Credits™, Association of Northern California Oncologists, Multidisciplinary Tumor Board
- 47 American College of Medical Genetics and Genomics CME Credits
- 47 American Society for Clinical Laboratory Science (ASCLS) Professional Acknowledgment for Continuing Education (P.A.C.E.®) Credits
- PeerView CME Credits
- Navigating the Complexities of Biomarker Testing in the Expanding Field of Precision Immuno-Oncology: Latest Evidence, Current Challenges, and Practical Guidance for Pathologists; September 9, 2020
- Perspectives on Innovative Treatment for B-Cell Malignancies: The Convergence of Precision Medicine with Groundbreaking Therapeutics; August 11, 2020
- How I Think, How I Treat: Understanding Innovation in Multiple Myeloma—New Models for Attacking Disease Across the Clinical Spectrum; July 1, 2020
- Patient Stories from the HCC CaseBook: Expert Guidance on Optimizing Outcomes and Care With Newly Available and Emerging Therapies; June 30, 2020
- Everything You Need to Know About Biomarkers, Immunotherapies, Combinations, and Other Emerging Approaches for Lung Cancer; June 25, 2020
- Transforming Modern Care in AML: Clinical Solutions with Novel Agents for Diverse Patient Populations; June 24, 2020
- Moving in Leaps and Bounds Towards Expanded Precision Treatment of HER2- or HER3- Driven Breast, Gastrointestinal, Lung and Other Cancers: Current Challenges, Opportunities for Improvement, and Practical Considerations; June 23, 2020

TEACHING EXPERIENCE

2012-14

Lecturer, Technical and Professional Writing Program

San Francisco State University

Advisor: Professor Bob Dvorak, PhD

- Taught "Writing Process and Documentation."
- Designed syllabi according to department guidelines, conducting lectures, meeting with students, holding office hours.
- Assignments included writing tutorials, standard operating procedures, use case scenarios, process descriptions, and business writing.

Lecturer, College of Science and Engineering

San Francisco State University

Advisor: Associate Dean Robert Ramirez, PhD

- Taught “Professional and Scientific Writing Skills” to graduate students in the College of Science and Engineering.
- Conducted lectures on writing in the biomedical sciences and ESL using PowerPoint and classroom technology.
- Conducted lectures on science and technology studies.
- Graded papers while offering extensive feedback.
- Taught students how to critique scientific journal articles, write grant proposals and write popular press scientific articles.
- Encouraged student participation and engagement through classroom participation.

2008-2010

Academic Year Lecturer, Department of English

Santa Clara University

Department Chair: Professor John Hawley, PhD

- Taught Freshman Composition and Rhetoric.
- Core Curriculum Advisor for Science, Technology and Society Critical Thinking and Writing Program.
- Used interdisciplinary approaches to teach critical thinking and social justice in a course entitled “Science, Ethics and Society.”
- Designed syllabus according to department guidelines. Participated in Core Curriculum initiatives.
- Conducted lectures on technical writing, biomedicine, health and society, science and technology studies, history/philosophy of science, rhetoric of science, bioethics, genetic testing, nature/nurture debates, environmental studies, postcolonial studies of science, and ethics.
- Assigned short reading responses on the readings, short essay assignments and longer length term/research papers.
- Used Blackboard, electronic discussion boards and PowerPoint.
- Showed films such as Gattaca and Inconvenient Truth in class. Gave extensive written feedback to written assignments.
- Held one-on-one conferences with students. Held office hours.
- Encouraged student participation through in class discussion, mock debates and in class writing assignment
- Advised students on academic and career goals.

2006

Dartmouth Medical School

Adjunct Lecturer

- Taught Medical Humanities to First Year Medical Students.

Courses:

“Writing Process and Documentation” (1 section, 21 students)

“Professional and Scientific Writing Skills” (3 sections, 10-19 students per section)

“Science, Ethics and Society” (6 sections, 20 students per section.)

“Technical Writing for Engineers” (1 section, 22 students per section.)

“Science, Medicine and Society” (3 sections, 22 students per section.)

“Modernist Art and Literature” (1 section, 15 students per section.)

“Medical Humanities” (1 seminar, 3 students)

RESEARCH EXPERIENCE

University of California Los Angeles, Department of Microbiology and Immunology

January 2011-August 2012

PI: Arnold Berk MD

- Research on transcriptional regulation of adenovirus genes, Conducted site directed mutagenesis and CHIP-Seq experiments.

- Investigated chromatin structure and regulation of human beta-globin gene expression in a biomedical laboratory. Spoke at an oral session at the American Society of Hematology Convention (see Conferences section for title of presentation).
- Wrote two National Human Genome Research Institute-ELSI grants (“Critical Theory and the Human Genome Project”, unfunded).
- Conducted research on the mechanism of transcription factor binding in a molecular biology laboratory as part of an effective cross-functional team. I used chromatin immunoprecipitation assays to determine the binding activity of the transcription factor involved in hematopoiesis.
- Advanced my research on healthcare policy, literary theory, medical humanities, bioethics and science studies.
- Attended and led sessions at conferences on literary studies (American Comparative Literature Association; Modernist Studies Association) and published papers in journals on genetics and ethics (New Genetics/New Identities) (see Conferences and Publications section for titles).
- I conducted an anthropological ethnography of the laboratory, leading to insight on ethics in laboratory science and medicine. This led to the publication of my second book, *Science, Cultural Values and Ethics*.
- Conducted field studies of laboratory investigation to develop a theory of scientific practice in the context of literary criticism.

SKILLS

- Clinical and scientific literature reviews
- Topic Based authoring in DITA/XML using Minimalism
- CCMS
- XMetaL
- Unstructured and structured Adobe FrameMaker
- Adobe Acrobat
- Adobe Photoshop
- Adobe Illustrator
- InDesign
- Visio
- SnagIt
- MS Paint
- MS Word
- MS PowerPoint

Proficiency in various immunology, molecular biology and biochemistry techniques: Cell/Tissue Culture, Transformations, Transfections, DNA/oligo quantification, Cloning, Subcloning, PCR, Gene amplification, DNA Sequencing, Gel electrophoresis, Plasmid DNA and Genomic DNA purification, DNA ligation and quantification, Chromatin Immunoprecipitation assays, qPCR, Southern blotting, Genotyping, Flow cytometry, Western blotting, Recombinase Mediated Cassette Exchange, ELISA, Chromatin Immunoprecipitation Sequencing, Site-directed Mutagenesis, DNase Assays, HPLC, siRNA techniques and High-throughput genome sequencing

PUBLICATIONS: Books

Evolving Cancer Therapies, Springer Nature, under contract.

A Dialectical Mind: Essays on Literary Studies, Science and Medicine, Eliva Press, October 30, 2023.

Cancer Immunotherapies: Solid Tumors and Hematological Malignancies, Ed. Priya Hays, Springer Nature, May 13, 2022.

Advancing Healthcare Through Personalized Medicine, Second Edition
Springer Nature, September 28, 2021.

Advancing Healthcare Through Personalized Medicine, CRC Press/Taylor & Francis, March 12, 2017.

Science, Cultural Values, and Ethics, Science in Society series, Common Ground Publishing, April 2013.

Molecular Biology in Narrative Form: A Study of the Experimental Trajectory of Science, Volume 64 in the Berkeley Insights in Linguistics and Semiotics Series, Peter Lang Publishing, October 2006.

PUBLICATIONS: Peer-Reviewed Articles

Cancer Metastasis: Lymphadenopathy

Invitation for authoring section on “Personalized Cancer Medicine” based on *Advancing Healthcare Through Personalized Medicine*, Second Edition

Implementation of mHealth Technologies in Emergency Medicine Departments in the Developing World Enabled by Precision Medicine”

BMJ Public Health, submitted, under peer review

“Artificial Intelligence for Cytopathological Applications in Cancer: A Review of Accuracy and Analytic Validity”

European Journal of Medical Research, submitted, under peer review.

“Personalized Cancer Medicines”

Open Access Government United Kingdom, July 2024

“Clinical Decision Making in Advanced and Metastatic Breast Cancer Cases between PARP Inhibitors and CDK4/6 Inhibitors: A Review”

Clinical Case Studies and Clinical Reports, July 2024

“Implementation of mHealth Technologies in Emergency Medicine Departments in the Developing World Enabled by Precision Medicine”

Emergency Medicine Journal, submitted, under review

“Artificial Intelligence for Cytopathological Applications in Cancer: A Review of Accuracy and Analytic Validity”

Discover Oncology, submitted, under review.

“Personalized Medicine: “Tyranny of the Gene”

OpenAccessGovernment UK, January 2024

“Harnessing the Viral Replication Cycle for Oncolytic Viral and Immunotherapy Combination Strategies

Chapter, Edited Collection: *Viral Replication Cycle*, InTech Open, November 2023.

“The emergence of precision medicine for oncology”

invited article, OpenAccessGovernment UK, July 2023

“Real-time qPCR and Rapid Antigen Testing of COVID-19 Testing: A Review and Comparison of Analytical Validity”

Rapid Antigen Testing, ed. Laura Anfossi, accepted in press

“Immune Checkpoint Blockade Response and Resistance: Next Generation Therapies for Solid Tumors”,

Frontiers in Immunology and Immunotherapy, May 2023

“Communicating Clinical Trial and Genomic Data to Cancer Patients: Emerging Communicative Frameworks”

SSRN Preprint 2022

“Clinical Tier Grading of Cancer Stem Cells According to Clinical Characteristics for Immune Checkpoint Inhibitors Guided by mRNA stemness index”

Medical Research Archives, official journal of European Society of Medicine, November 30, 2022

“Evidence Basis for Pharmacogenetic Testing in Psychiatry”

Journal of Medical Sciences and Health Research, Vol 5, Issue 3.

“Clinical Development and Therapeutic Applications of Bispecific Antibodies for Hematological Malignancies”

Cancer Immunotherapies: Solid Tumors and Hematological Malignancies, Ed.

Priya Hays, Springer Nature

“Clinical Sequelae of the Novel Coronavirus: Does COVID-19 Infection Predispose Patients to Cancer?”

Preventive Medicine, Epidemiology and Public Health, May 2021, Volume 2, Issue 2

- “Challenges for chimeric antigen receptor T cell therapies in the clinical setting: mechanisms of resistance in non-responders”
Biomedical Journal of Scientific and Technical Research, February 2020
- “Clinical Care of CAR T-cell Patients and Managing immune-Related Adverse Effects in the Ambulatory and Hospitalized Setting: A Review”
With Deepak Asudani MD, MPH and Caitlin Costello MD
Future Oncology, December 2019.
- “Review of Therapeutic Approaches for B-Cell Malignancies with Immune Checkpoint Blockade and Chimeric Antigen Receptor T-Cell Therapies: Development, Benefits, and Limitations”
Journal of Clinical Investigation and Studies, 2019, Vol. 2, pp. 1-6.
- “Personalized Medicine: Paradigm Shift or Revolution”
Genetics in Medicine, Official Journal of American College of Medical Genetics, November 2018 online issue.
- “Contested Boundaries: How Scientists Deal with Uncertainty and Ambiguity in Language,”
in *Language as a Scientific Tool: Shaping Scientific Language Across Time and National Tradition*; Edited by Miles MacLeod, Rocio G Sumillera, Jan Surman, and Ekaterina Smirnova, 2016, Routledge Studies in Cultural History, pp. 74-88.
- “Epistemic Cross-Talk: Why we need—and should desire—interdisciplinarity,”
Interdisciplinary Literary Studies, Vol. 15, No. 2 Fall 2013, pp. 221-239.
- “Whence Social Determinants of Health? Effective Personalized Medicine and the 2010 Patient Protection and Affordable Care Act,”
Journal of Clinical Research and Bioethics, 2012, S-5.
- “Narratives of Science: Literary Theory and Discovery in Molecular Biology,”
in C.C. Barfoot and Valeria Tinkler (eds.),
Restoring the Mystery to the Rainbow: Literature’s Reflections on Science, DQR Studies in Literature, Vol. 78, pp.429-447.
- “Bioeconomy and the Third Industrial Revolution in the Age of Synthetic Life,” with Michael A. Peters, PhD.
Contemporary Readings in Law and Social Justice 2:2 (2010).
- “Biocapitalism and the Politics of Life,” with Michael A. Peters, PhD.
Geopolitics, History and International Relations 2:2 (2010).
- “‘Nanoselves’: NBIC and the Culture of Convergence,”
Bulletin of Science, Technology and Society, 30:2 (2010): 119-129.
- “Reception Studies in France: Social Contexts, Reader Interpretation and the Role of Julia Kristeva,”
L’Esprit Créateur, Special Issue on Reception Studies in France, 49:1 (2009): 111-124. Reprinted in *Contemporary Literary Criticism*. Ed. Jeffrey W. Hunter. Vol. 340. Detroit: Gale, 2013.
- “The Legitimation of Local Knowledges: Introducing the Postmodern into Laboratory Science,”
Social Semiotics, 18:4 (2008): 481-491.
- “Making Science Accessible: A Semiotics of Scientific Communication,”
with Christopher H. Lowrey, MD, *Biosemiotics*, 1 (2008): 253-269.
- “Genomics, social formations and subjectivity,” in Paul Atkinson, Peter Glasner and Helen Greenslade (eds.) *New Genetics, New Identities*, London: Routledge Press (2007): 178-191.
- “Targeting GATA-1 to binding sites in nuclear chromatin,”

Blood Cells, Molecules and Diseases, 38(2007).

“Effect of Lead and Cadmium on Erythroid Differentiation in GATA-1 Dependent Gene Expression,” Blood Cells, Molecules and Diseases, 37(2006):164-172.

“A Dialogue on the Scientific Method: Assessing the Foucauldian Method and the Marxist Method,” Exit 9 The Rutgers Journal of Comparative Literature, VII (2005):15-28.

“Paradigm Shifts and New Worldviews: Kuhn, Laudan and Discovery in Molecular Biology,” Reconstruction: Online Cultural Studies Journal, 4(2004).

Invited Articles

“Of Dickens and Darwin,” TheScientist.com, (2007).

“Yin, meet yang,” Point of View, Dartmouth Medicine, (2007): 62.

CONFERENCES/PRESENTATIONS/INVITED TALKS

“Clinical Decision Making for Breast Cancer Between PARP inhibitors and CDK 4/6 Inhibitors”
Invited Speaker, 2024 Global Conference on Pharmaceuticals and Drug Delivery”
Rome, Italy September 19, 2024

“Bispecific Antibodies from Bench to Bedside”
Panel Moderator, 2023 Cambridge HealthTech PEP Talk
San Diego, CA January 20, 2023

“Bispecific Antibodies for Hematologic Malignancies: Clinical Development, Therapeutic Applications, and Recent Clinical Trials”
Invited Speaker, 2023 Cambridge HealthTech, PEP Talk
San Diego, CA, January 19-20, 2023

“Clinical Tier Grading of Cancer Stem Cells According to Clinical Characteristics for Immune Checkpoint Inhibitors Guided by mRNA stemness index”
Poster Presentation, 37th Society for Immunotherapy of Cancer Annual Meeting,
Boston, MA, November 8-12, 2022

“Spatial Transcriptomics Approaches to Characterizing Childhood Intellectual Disability,”
Poster Presentation, 2022 American College of Medical Genetics and Genomics
Annual Meeting,
Nashville, TN, March 22-26, 2022

“From Older Agents to Newer Generation Treatments: The Development of Targeted Therapies for Lung Cancer,”
Invited Speaker (industry expert) at Pharma R&D Conference,
San Francisco CA, February 22-23, 2022.

“Tumor Agnostic Models in Drug Development for Non-Small Cell Lung Cancer (NSCLC)”
Poster Presentation, 2021 Multidisciplinary Thoracic Cancers Symposium, American Society Thoracic Radiation
Oncology,
December 4-6, 2021

Featured speaker/presenter, Panel Discussant,
2nd Annual Medical Writing Innovation Strategies, Virtual Online session,
June 29-30, 2021.

Advancing Healthcare Through Personalized Medicine
Featured title at 6th Annual LocalLit Faire, Dr. Martin Luther King, Jr., Library, San Jose, CA, December 16, 2018.

“Innovative Tools and Ingenious Systems: ELSI Learned from Writing my Book on Personalized Medicine”
2017 4th Annual ELSI Congress, Jackson Laboratories, Farmington, CT.

“Improving Medication Adherence by Adopting Minimalist Standards”
2016 Pharma and Device Packaging and Labeling Conference, San Mateo, CA.

- “Usability Testing on the GeneXpert Bladder Cancer RUO Package Insert”
2016, Cepheid Corporation, Sunnyvale, CA.
- “Contested Boundaries: How Scientists Deal with Uncertainty in Language.”
2010 Language as Scientific Tool Conference in Vienna, Austria.
- “The Physician as Reader: Ethics and Interpretation in Medicine.”
2010 Society for Literature, Science and Arts Conference in Indianapolis, IN.
- “Genomic Variation and Cancer: The Ethical Dimensions of Personalized Medicine.”
2010 Genetics and Ethics in the 21st Century Conference: Genomic Diversity and Health Disparities in Denver, CO.
- “Advancing Stem Cell Research Efforts for Social Benefit.”
2010 Stem Cell World Congress in San Francisco, CA.
- “A Unique Ethnography of the Laboratory: Postmodernism, Science Studies and Ethics.”
2009 International Conference on Science in Society at University of Cambridge, UK.
- “The Iterative Process behind Nanoconvergence.”
2008 Society for Literature, Science and the Arts Conference in Charlotte, NC.
- “The Paradox of Reading in a Democratic Society.”
2008 South Atlantic Modern Language Association Conference in Louisville, KY.
- “Signs and the Generation of Scientific Knowledge in the Laboratory.”
2008 Semiotic Society of America Conference in Houston, Texas.
- “Scientific Practice in the Context of Literary Paradigms.”
2007 Society for Philosophy of Science in Practice Conference at University of Twente, Twente, Netherlands.
- “Narrative Approaches to Science.”
2007 International Conference on Narrative at Washington, D.C.
- “Specificity Protein 1 Consensus Binding Sequences Flank Many Functional GATA-1 Binding Sites and are Sufficient to Allow GATA-1 Binding to a WGATAR sequence in Nuclear Chromatin.”
2006 American Society of Hematology Convention in Orlando, Florida.
- “Integrating Literary Theory and Biomedicine: New Conceptual Approaches.”
Invited speaker for the 2006 Department of Philosophy Colloquium
University of California, Santa Cruz, co-sponsored by the History of Consciousness Department and Feminist Studies.
- “Modernist Science and Its Caveats”
Panel Organizer, 2006 Modernist Studies Association Conference in Tulsa, Oklahoma.
- “Literary Tropes and Molecular Biology in the Postmodern Era.”
Seminar Organizer, 2006 American Comparative Literature Association Conference at Princeton University.
- “Examining the Scientific Method: Science’s Questionable Claims to Lucidity.”
2004 Western Humanities Alliance Conference at the University of California, Santa Cruz.
- “An Epistemological Justification for a Poststructuralist Reading of Science.”
2004 Theorizing Methodologies Conference at the University of California, Los Angeles.
- “The Effects of Genomics on Social Formations and Subjectivity.”
2004 International Centre for the Economic and Social Aspects of Genomics

Conference at the Royal Society, London, England.

“Subverting Semiotics: The Humanist Tradition and Skepticism in the French and Italian Renaissance.”
2004 French and Italian Graduate Student Conference at the University of Texas at Austin.

“Kuhn, Laudan and Discovery in Molecular Biology.”
2003 Society for Social Studies of Science (4S) Conference at Atlanta, GA.

“The Signifier as Discursive Practice: A Post-Structuralist’s View of Science.”
2002 Society for Social Studies of Science (4S) Conference at Milwaukee, WI.

“Translation through Post-Structuralism: A Semiotic and Discursive Analysis of Science.”
2002 Western Humanities Alliance Conference at the University of California, Irvine.

Public Lectures

“Secular Visions of Nanotechnology: The Religious Context.”
Theology and Technology Series, United Methodist Church, Evanston, Illinois, Spring 2008.

“Bioethics and Clinical Research Ethics.” Materials Science and Engineering Department, Northwestern University, Spring 2008.

“Legitimizing Local Knowledges: Introducing the Postmodern into Laboratory Science.”
Department of Comparative Literature, Dartmouth College, Fall 2005.

“Architecture, Art and the External Homunculus.”
Culture, Art and Technology 1C, UC San Diego, Fall 2004.

“Mind-Body Dualism.”
Cognitive Science 11, UC San Diego, Spring 2003.

“Orientalism in the Asian-American Context.”
History 7B, UC San Diego, Winter 2003.

SOCIETY MEMBERSHIPS

- Modern Language Association
- Society for the Study of the Social Studies of Science
- Modernist Studies Association
- Society for the Study of Narrative Literature
- American Comparative Literature Association
- Society for the Philosophy of Science in Practice
- American Society of Hematology
- Semiotic Society of America
- South Atlantic Modern Language Association
- Society for Literature, Science and Arts
- American Society of Clinical Oncology
- Society for Immunotherapy of Cancer
- American College of Medical Genetics and Genomics
- Personalized Medicine Coalition
- Society of Hematology and Oncology
- American Association of immunologists

EDITORIAL BOARD MEMBER

- Cancer Therapeutics and Immunotherapies

PEER REVIEWER

- npj Precision Oncology

NEW REVIEW -- HAYS / Advancing Healthcare Through Personalized Medicine, 2nd Edition. Springer, 2021, \$219.99.

[AUTHOR]

Hays, Priya

[BIBLIOGRAPHIC DATA]

ISBN: 978-3030800994, 745 pages, soft cover.

[DOODY'S NOTES]

[REVIEWER'S EXPERT OPINION]

Vincent F Carr, DO, MSA, FACC, FACP(Uniformed Services University of the Health Sciences)

****Description****

This book, now in its second edition, presents the advancements of personalized medicine since the first edition was published in 2017.

****Purpose****

The scope of personalized medicine is ever expanding with research in many areas beyond the initial attempts of matching medication to genetics. This edition details how and in what direction personalized medicine has evolved.

****Audience****

This book is for everyone in the scientific community, as well as academics, laypersons, and policymakers. There are many far-reaching aspects of the science focused on individual genetics.

****Features****

The book has 14 chapters that cover biomedical innovation and policy in the 21st century; the rise of genomics and personalized medicine; alliances between knowledge infrastructures and the digitalization of precision health; great strides in precision medicine such as personalized oncology, immunotherapies, and molecular diagnostics; biomarkers, diagnosis, treatment, and education from the clinic to the boardroom; new sets of tools for physicians; legislation, reimbursement, and the regulatory landscape; and moral, societal, and ethical issues including claims, consequences, and caveats. Each chapter has many subchapters detailing specific aspects of personalized and precision medicine.

Samples of these chapters include the Human Genome Project; Sequencing and Genomic Medicine; Implications of Precision Medicine for Patient Care and Disease Treatment; Liquid Biopsy; Type II Diabetes; Neurological Disease:

Alzheimer's Disease; FDA Pharmacogenomics Drug Labeling; and Patient Preference, Right "Not to Know." The chapter on personalized oncology is greatly inclusive of many studies in breast and leukemia cancer research. Each subchapter provides a concise, yet comprehensive outline of the topic augmented by many figures and tables with extensive references.

****Assessment****

This second edition is an extraordinary compendium of the state of the art in personalized genomic evidence, bringing together some of the important research that is building the foundation for future standards of medical care.

Weighted Numerical Score: 100 - 5 Stars!

PATIENT-CENTRIC CARE

A Second Edition Adds New Value to Personalized Medicine

by
**RONALD
PIANA**

→ Since the publication of the first draft of the human genome, genotyping and genomics have been integrated into standard clinical care for select cancers. But as precision medicine in oncology develops to comprise big data, proteomics, transcriptomics, molecular imaging, and more, there are numerous challenges ahead to translate that archetype into meaningful and equitable health care for patients. To do so, we need to aggregate what we know, or a good deal at least, about the current and unfolding state of personalized medicine. In the *Second Edition of Advancing Healthcare Through Personalized Medicine*, **Priya Hays, PhD**, attempts to do just that.

Dr. Priya is an accomplished science writer with two other noted books under her belt and more than 15 publications in leading medical journals. In recognition of her accomplishments, Dr. Priya is an elected member of ASCO, the American College of Medical Genetics and Genomics, and the Society for Immunotherapy of Cancer.

Data Packaged in Big Ideas

THIS IS A BIG BOOK, at more than 700 pages, organized into 13 chapters with an excellent conclusion. The author makes her target audience clear: physicians and physician/scientists; scientists invested in personalized medicine research also constitute a primary audience.

“Medicine has come a long way from the days of Hippocrates, and the journey to better patient care is always imminent.”

—PRIYA HAYS, PhD

The author leads off with an introduction that sets the table with the historical backdrop of five targeted therapies, most notable among them, the chronic myeloid leukemia therapy imatinib, which, as noted, had one of the shortest U.S. Food and Drug Administration (FDA) approval cycles in history. Dr. Hays writes: “Each [drug] highlights certain aspects of personalized medicine and positive lessons learned: the discovery of driver mutations that drugs could target, rapidly facilitated clinical trials that lessen FDA approval time for breakthrough drugs, and co-development of drugs and companion diagnostics that lead to effective predictive treatment for patients, and the secondary benefit of additional scientific and clinical research toward the

discovery of molecularly targeted treatments.”

Despite the unavoidable dryness of the subject matter, the well-crafted “stories” of five practice-changing therapies gives readers a clue as to why doggedly pursuing the personalized course laid out in this book has the potential to markedly increase overall survival outcomes for patients with cancer, lower health-care costs, help to repair our overburdened delivery system, and develop cutting-edge options for disease prevention by early detection and risk prediction models. Theories in health care are often attractive but fleeting. However, Dr. Priya grinds fanciful objectives such as liquid biopsy into a reality that her audience will embrace. She backs up each postulate with data and science that are both pleasingly dense and accessible at the same time. But the author never lets readers lose sight of the main objective of personalized medicine—the patient with cancer. To that end, she also addresses concerns such as “informed consent, confidentiality breaches in data storage, the appropriate use and interpretation of genetic data, and genetic discrimination on [clinical trial] subject selection based on race or ethnicity.”

Patients Take Center Stage

CHAPTER 2 elucidates the marvel of genomics and personalized medicine, outlining how the grand scheme that The Human Genome Project unveiled, in all its dizzying admixture of science and politics, paved the way for personalized medicine. The following chapter uses interesting patient narratives and is perfectly positioned to set up a deep dive into the science behind it all: “a knowledge network of disease that would include molecular data encompassing individuals’ genomes, transcriptomes, epigenomes, proteomes, microbiomes, metabolomes, and exposomes, incorporated with traditional taxonomies based on signs and symptoms.”

For readers of *The ASCO Post*, chapters 5 and 6 will be worth the wait. Dr. Hays focuses on the clinical power of harnessing already-vetted data for determin-

BOOKMARK

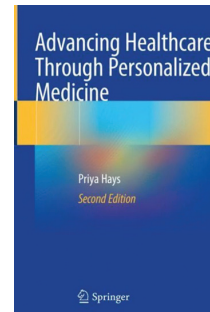
Title: *Advancing Healthcare Through Personalized Medicine*

Author: Priya Hays, PhD

Publisher: Springer

Publication Date: September 2021 (Second Edition)

Price: \$165.99, hardcover, 745 pages



ing health outcomes with the newer targeted therapies and immunotherapies. Big data, artificial intelligence, and digital pathology—tools that may seem out of reach to busy community clinicians—are tamed and demystified. On a more plebian level, the power of a fully integrated electronic health record system is explicated and should be excised into a pamphlet for sluggish health-care wonks and policymakers.

Sobering Facts and a Way Forward

THE DEPTH of technical information and the well-spring of novel advances carefully woven into a personalized medicine matrix are admirable. There are a few times when complexity might obscure the end point of certain therapeutic strategies, but those rare instances make for a small gripe given the scope and value of the book.

Chapters 12 and 13 are standouts, setting this book apart from others in the field. Here, Dr. Hays gives a frank dissection of health economics and the attended moral and ethical issues faced with the emerging trends in medicine. Chapter 12 begins with some sobering facts about our untenable spending and waste, bringing her insight into how personalized medicine can become a value-based set of tools and concepts to shave costs and improve outcomes. Big Pharma can become a partner in this effort, willingly. The author deftly uses a case study of trastuzumab as a reason for a positive outlook for our system’s future.

Throughout *Advancing Healthcare Through Personalized Medicine*, figures, charts, and tables are skillfully executed and placed, giving readers visual accents to the text. This is a top-notch operation, from cover to cover. “Medicine has come a long way from the days of Hippocrates, and the journey to better patient care is always imminent,” Dr. Hays concludes. She should be proud to have helped pave the road on that journey to better patient care with her outstanding book, which is highly recommended for readers of *The ASCO Post*. ■

☆☆☆ Score: 88

Cancer Immunotherapies: Solid Tumors and Hematological Malignancies

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At A Glance

This book presents the clinical scope of cancer immunotherapeutic agents for solid tumors and hematological malignancies, elaborates on the scientific details of their modes of action, and presents the impact of these agents on oncology, patients and the broader healthcare system. At present, cancer immunotherapies fall broadly into three categories: immune checkpoint inhibitors (ICIs), adoptive T cell therapies, and cancer vaccines which have distinct mechanisms of action. Immune checkpoint inhibitors rely upon disrupting tumor antigen recognition as self by the immune system through inhibition of checkpoint molecules. Adoptive T cell therapies involve the engineering of T cells ex vivo to target and destroy tumor cells. The first part of this book will provide an overview of the discovery and mechanistic details of the technology. The second part will be devoted to elaborating on the clinical outcomes, successes and limitations for specific tumor subtypes, which includes both solid tumors and hematological malignancies for both pediatric and adult populations. As such, the book offers a valuable resource for oncologists, hematologists, and all those seeking an up-to-date overview of cancer immunotherapies.

Reviewer: Shashank Sama, MD (University of Utah School of Medicine)

Description

This book is an amalgamation of various chapters tackling immunotherapy broadly as well as in specific contexts such as applications in melanoma and glioblastoma. It is mostly narrative with a few chapters utilizing tabular descriptions of relevant immunotherapy clinical trials in progress as well as illustrations for specialized concepts.

Purpose

The book intends to serve as both a comprehensive account of the various immunotherapy modalities currently in practice and the opportunities for future applications. This is certainly a worthy objective as a

deeper understanding of immunotherapy would serve clinicians well in practice.

Audience

The book appears to be intended for quite a broad audience, from medical students and fellows to basic science researchers and specialized oncology clinicians. It certainly serves as a sound introduction to immunotherapy with explanations of the concepts and the varied applications, both current and anticipated. However, given the broad audience it serves, the book may be somewhat excessive in scope for cancer specialists. The authors are appropriately credible.

Features

I greatly enjoyed a few of the chapters, such as chapters 3 and 6, which expanded my understanding of immune mechanisms at play in the background. I noticed a few blind spots, particularly with the notable absence of discussion of KRAS directed adoptive T cell therapy in a multitude of cancers, especially pancreatic cancer where this holds immense promise and is worth introducing and expanding in a book of this nature. The omnibus-like feature of this collection will appeal to budding researchers/scientists looking for a comprehensive overview, but may be limiting to clinician learners and specialized clinicians for whom the articles of relevance may be fewer.

Assessment

Overall, this book is enlightening in its detailing of the concepts of immune mechanisms, and it will serve as a credible resource for advanced learners. I would easily recommend this book to any researchers and scientists seeking to deepen their understanding of immunotherapy or looking to find a roadmap of current ongoing immunotherapy investigations. On the other hand, this may not be the best resource for specialized oncology clinicians with disease subtypes not noted in the chapter list.

Range	Question	Score
1-10	Are the author's objectives met?	8
1-10	Rate the worthiness of those objectives.	10
1-5	Is this written at an appropriate level?	5
1-5	Is there significant duplication? (1=significant, 5=insignificant)	3
1-5	Are there significant omissions? (1=significant, 5=insignificant)	3
1-5	Rate the authority of the authors.	4
1-5	Are there sufficient illustrations?	5
1-5	Rate the pedagogic value of the illustrations.	4
1-5	Rate the print quality of the illustrations.	5
1-5	Are there sufficient references?	5
1-5	Rate the currency of the references.	4
1-5	Rate the pertinence of the references.	4
1-5	Rate the helpfulness of the index.	5

1-5	If important in this specialty, rate the physical appearance of the book	N/A
1-10	Is this a worthwhile contribution to the field?	10
1-10	If this is a 2nd or later edition, is this new edition needed?	N/A
