Oncology Nurses Role in Clinical Trials and Research in Advancing Cancer Research in GI

Tahani Dweikat EMHCA, BSN, RN, OCN®
Clinical Research Nurse, Oncology Clinical Trials
Oncology Nursing Society
Duarte, California

Agenda

- Regulatory background
- Brief overview of the oncology nurse role during clinical trials
- Implementation considerations
- Oncology Nursing Society clinical trials competencies

The Nuremberg Code 1947	The Declaration of Helsinki (1964)	The Belmont Report (1979)
• **Establishes a basic code of ethics for experimentation on human subjects** • Developed in the wake the World War II—when human and often fatal experimentation were conducted on human subjects without consent	• **Establishes specific guidelines for physicians conducting human research.** • Developed by the World Medical Association (WMA) • Provides the "Ethical Principle for Medical Research involving Human Subjects"	• National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research created "Belmont Report" ✓ **Respect for persons:** treating people as autonomous agents and protecting those with diminished autonomy ✓ **Beneficence:** minimizing potential harms and maximizing benefits of participation ✓ **Justice:** distributing benefits/risks fairly

Human Subject Research

- ✓ Common Rule 45 CFR 46
- ✓ FDA Regulations 21 CFR 50 & 56

Common Rule

- The term Common Rule refers to 45 CFR 46.
- CFR is the Code of Federal Regulations (administrative law that governs research with human subjects and codifies the ethical principles of the Belmont Report).
- It defines what constitutes “research” as well as defines ”human subject”

What is Common Rule ?

- Rule is United States federal policy that grew out of revisions to the **Declaration of Helsinki**.

- The current U.S. system of protection for human research subjects
- Heavily influenced by the **Belmont Report**, written in 1979 by the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research.

- The Common Rule generally requires that researchers to get informed consent from volunteers who participate in research.

- This includes giving them information about:
  - Study or clinical trial
  - Rights and responsibilities
  - Possible risks and side effects
  - Benefits

FDA Regulations 21 CFR parts 50 and 56

- FDA regulations based on use of FDA regulated product: drugs, devices, or biologics
- These regulations are applicable to regulators, research agencies, investigators and sponsors.
- The regulations are applied according to the study.
- There are certain similarities in the existing Common Rule and the FDA regulations such informed consent (50) as IRB review (56).

Regulatory Protections

Oncology nurses involved in clinical trials should be aware of the three basic protections for human subjects:

1. **Institutional Assurances:**
   - Each institution engaged in human subject research comply with the regulations

2. **Institutional Review Board (IRB) Review:**
   - Approval necessary prior to beginning of human subject studies

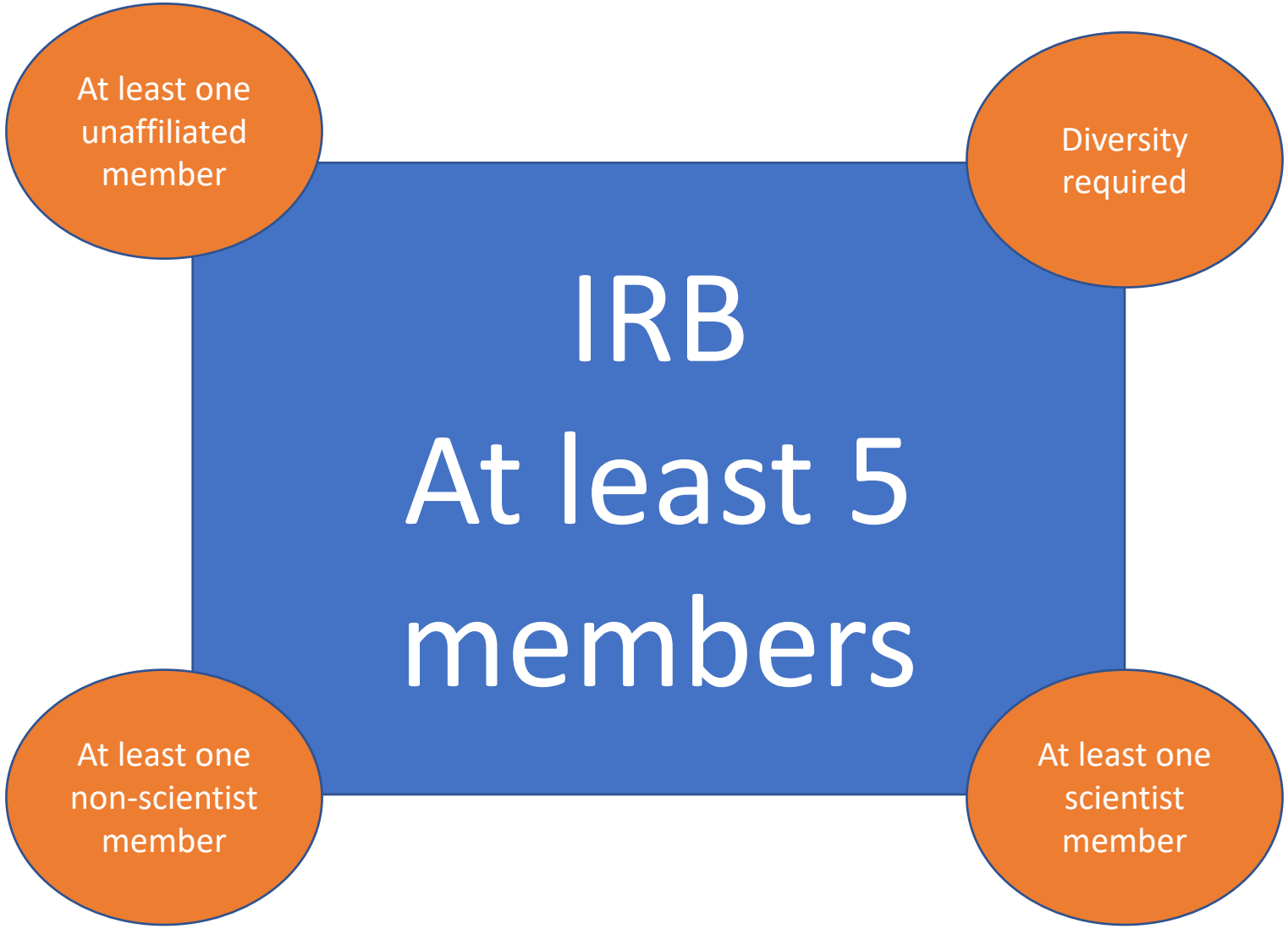
3. **Informed Consent:**
   - Prior to involvement of human subjects in research

Why Do We Have IRB ?

Federal regulations require IRB oversight of research involving human-subjects.

Title 45: *Public Welfare (DHHS)*
Part 46: *Protection of Human Subjects*

Title 21: *Food and Drugs*
Part 50: *Protection of Human Subjects*
Part 56: *Institutional Review Boards*


At least one unaffiliated member
Diversity required
IRB
At least 5 members
At least one non-scientist member
At least one scientist member

On top of advancing cancer treatment and novel agents

Oncology clinical trials are important in the improvement

- Patients' quality of care and
- Outcomes for people with or at risk for cancer.

Clinical Research Team Roles/Members

Investigator(s)

- Principal Investigator (PI)
- Sub-investigator
- Multi-site protocols
  - Study
  - Site

Study Coordinator

- Nurse
- Non-nurse

Clinical Data Manager

Participant/Human Subjects

The Clinical Research Team: General Responsibilities

- All members of the research team must understand and adhere to federal regulations …it's the law

- Need sufficient study staff to perform clinical research efficiently and effectively:
  - Appropriate skill set and training
  - GCP (Good Clinical Practice) standards
  - Follow protocol requirements

What Makes Research Team/Team Members Successful ?

- Attention to details
- Know the “Common rule” and “FDA regulations”
- Excellent communication skills
- Flexibility
- Organizational skills
- Healthcare professional proper training, skill and competencies
- Ability to work independently

Oncology Nursing Society (ONS)

- Oncology nurses play a crucial and unique role in the trial setting
- ONS identified the core competencies required of a novice oncology clinical trials nurse (CTN)

Oncology Nursing Society (ONS)

- Oncology nurses play a crucial and unique role in the trial setting
- ONS identified the core competencies required of a novice oncology clinical trials nurse (CTN)

HIPAA

The Health Insurance Portability and Accountability Act (HIPAA) influenced the conduct of clinical trials

Mandating specific privacy protections for trial participants

Advancing Cancer Research in GI

Case Study

Voluntary Human Participants

- Male Subject, 59 known Metastatic Rectosigmoid Cancer
- Diagnosed in 2017,
- Exhausted Standard of care treatment
- MD discussed the clinical trial option for phase 1

Experimental Versus Observational Clinical Research

- One type of traditional clinical research is experimental, which may also be referred to as a clinical trial or interventional research. The hallmark of an experimental study is the use of a research intervention, which may be a drug, a medical device, a procedure, or a change in behavior.

- Typically, experimental research proceeds in a stepwise fashion through a series of phases that test concepts related to safety, optimal dosing or scheduling, adverse event identification, efficacy, risks and benefits compared to standard treatment, and long-term safety

National Institutes of Health [NIH], 2022)

Clinical Trial Process

PHASES OF CLINICAL DEVELOPMENT

Phase 1

- Study Participants: 20 to 100 healthy volunteers or people with the disease/condition.
- Initial safety, dose escalation studies to determine maximum tolerated dose
- Pharmacokinetic and pharmacodynamic properties; might be crossover design
- Absorption, distribution, metabolism and excretion studies
- Efficacy assessment, if possible
- Normal volunteers or subjects with condition under study
- Usually conducted at Phase 1 units, tightly controlled, in-patient setting
- **Approximately 70% of drugs move to the next phase**

Purpose: Evaluate the Safety, Tolerability

PHASES OF CLINICAL DEVELOPMENT

Phase 2

- Study Participants: Up to several hundred people with the disease/condition.
- Initial demonstration of efficacy in subjects with the condition under investigation
- Obtain short-term safety data
- *Multicenter, well-controlled studies*
- *Relatively small number of subjects per study*
- *Combined population: "…usually involving no more than several hundred subjects."*
- **Approximately 33% of drugs move to the next phase**

Purpose: Efficacy and side effects

PHASES OF CLINICAL DEVELOPMENT

Phase 3

- Study Participants: 300 to 3,000 volunteers who have the disease or condition
- Confirmation of short-term efficacy and safety
- Establish long-term efficacy and safety, as appropriate
- Assess overall therapeutic value
- Expanded controlled and uncontrolled studies
- Additional evidence of efficacy and safety
- Establish overall benefit-risk relationship
- Supports the final labeling content
- Combined population from several hundred to several thousand subjects."
- **Approximately 25-30% of drugs move to the next phase**

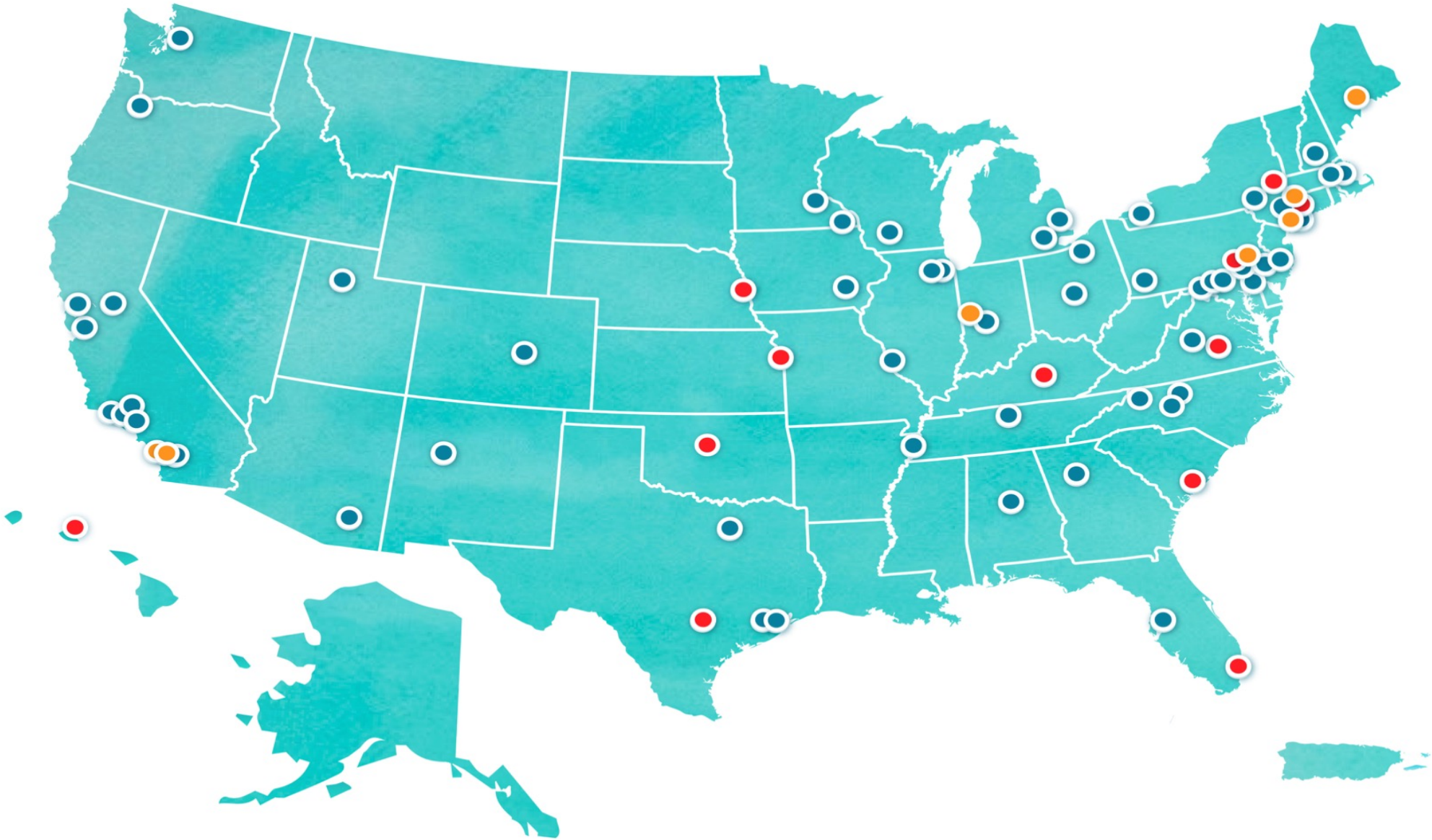
Purpose: Efficacy and monitoring of adverse reactions

PHASES OF CLINICAL DEVELOPMENT

Phase 4 (Post-marketing):

- Study Participants: Several thousand volunteers who have the disease/condition
- Address FDA requirements for additional information not in NDA
- Delineate additional information about the drug's risk, benefits and optimal use; continue assessing overall therapeutic value
- Surveillance for less common adverse events (spontaneous reports, registries)
- Design and number of subjects depends on study objective
- May be similar to Phase 2 or Phase 3 studies in design

Purpose: Safety and efficacy



the MIRACLE of SCIENCE with SOUL™ City of Hope®

NCI-Designated Cancer Centers

There are 71 NCI-Designated Cancer Centers, located in 36 states and the District of Columbia, that are funded by NCI to deliver cutting-edge cancer treatments to patients. Of these 71 institutions:

12 are Cancer Centers, recognized for their scientific leadership, resources, and the depth and breadth of their research in basic, clinical, and/or prevention, cancer control, and population science.

52 are Comprehensive Cancer Centers, also recognized for their leadership and resources, in addition to demonstrating an added depth and breadth of research, as well as substantial transdisciplinary research that bridges these scientific areas.

7 are Basic Laboratory Cancer Centers that are primarily focused on laboratory research and often conduct preclinical translation while working collaboratively with other institutions to apply these laboratory findings to new and better treatments.

(cancer.gov 2022)

Alabama	Colorado	Florida	Illinois	Kansas
O'Neal Comprehensive Cancer Center University of Alabama at Birmingham Birmingham, Alabama Comprehensive Cancer Center	University of Colorado Cancer Center Aurora, Colorado Comprehensive Cancer Center	Moffitt Cancer Center Tampa, Florida Comprehensive Cancer Center Sylvester Comprehensive Cancer Center University of Miami Miller School of Medicine Miami, Florida Cancer Center	Robert H. Lurie Comprehensive Cancer Center Northwestern University Chicago, Illinois Comprehensive Cancer Center The University of Chicago Comprehensive Cancer Center Chicago, Illinois Comprehensive Cancer Center	The University of Kansas Cancer Center The University of Kansas Kansas City, Kansas Cancer Center
Arizona	**Connecticut**	**Georgia**	**Indiana**	**Kentucky**
Arizona Cancer Center University of Arizona Tucson, Arizona Comprehensive Cancer Center	Yale Cancer Center Yale University School of Medicine New Haven, Connecticut Comprehensive Cancer Center	Winship Cancer Institute Emory University Atlanta, Georgia Comprehensive Cancer Center	Indiana University Melvin and Bren Simon Comprehensive Cancer Center Indianapolis, Indiana Comprehensive Cancer Center Purdue University Center for Cancer Research West Lafayette, Indiana Basic Laboratory Cancer Center	Markey Cancer Center University of Kentucky Lexington, Kentucky Cancer Center
District of Columbia	Hawaii	Iowa	Maine	Michigan
Georgetown Lombardi Comprehensive Cancer Center Georgetown University Washington, District of Columbia Comprehensive Cancer Center	University of Hawaii Cancer Center Honolulu, Hawaii Cancer Center	Holden Comprehensive Cancer Center University of Iowa Iowa City, Iowa Comprehensive Cancer Center	The Jackson Laboratory Cancer Center Bar Harbor, Maine Basic Laboratory Cancer Center	The Barbara Ann Karmanos Cancer Institute Wayne State University School of Medicine Detroit, Michigan Comprehensive Cancer Center University of Michigan Rogel Cancer Center Ann Arbor, Michigan Comprehensive Cancer Center

Maryland	Minnesota	New Hampshire	Washington	Ohio
Sidney Kimmel Comprehensive Cancer Center Johns Hopkins University Baltimore, Maryland Comprehensive Cancer Center University of Maryland Marlene and Stewart Greenebaum Comprehensive Cancer Center Baltimore, Maryland Comprehensive Cancer Center	Masonic Cancer Center University of Minnesota Minneapolis, Minnesota Comprehensive Cancer Center Mayo Clinic Cancer Center Rochester, Minnesota Comprehensive Cancer Center	Norris Cotton Cancer Center at Dartmouth Dartmouth-Hitchcock Medical Center Lebanon, New Hampshire Comprehensive Cancer Center	Fred Hutchinson/University of Washington Cancer Consortium Seattle, Washington Comprehensive Cancer Center	Case Comprehensive Cancer Center Case Western Reserve University Cleveland, Ohio Comprehensive Cancer Center The Ohio State University Comprehensive Cancer Center James Cancer Hospital and Solove Research Institute Columbus, Ohio Comprehensive Cancer Center
Massachusetts	**Missouri**	**New Jersey**	**Wisconsin**	**Oklahoma**
Dana-Farber/Harvard Cancer Center Boston, Massachusetts Comprehensive Cancer Center David H. Koch Institute for Integrative Cancer Research at MIT Massachusetts Institute of Technology Cambridge, Massachusetts Basic Laboratory Cancer Center	Alvin J. Siteman Cancer Center Washington University School of Medicine and Barnes-Jewish Hospital St. Louis, Missouri Comprehensive Cancer Center	Rutgers Cancer Institute of New Jersey Rutgers Biomedical and Health Sciences New Brunswick, New Jersey Comprehensive Cancer Center	University of Wisconsin Carbone Cancer Center Madison, Wisconsin Comprehensive Cancer Center	Stephenson Cancer Center The University of Oklahoma Oklahoma City, Oklahoma Cancer Center
South Carolina	**Nebraska**	**New Mexico**	**Utah**	**Oregon**
Hollings Cancer Center Medical University of South Carolina Charleston, South Carolina Cancer Center	Fred and Pamela Buffett Cancer Center Nebraska Medicine and the University of Nebraska Medical Center (UNMC) Omaha, Nebraska Cancer Center	University of New Mexico Cancer Research and Treatment Center University of New Mexico Albuquerque, New Mexico Comprehensive Cancer Center	Huntsman Cancer Institute University of Utah Salt Lake City, Utah Comprehensive Cancer Center	Knight Cancer Institute Oregon Health and Science University Portland, Oregon Comprehensive Cancer Center

Advancing Cancer Research in GI

Case Study

Voluntary Human Participants

- Male Subject, 59 known Metastatic Rectosigmoid Cancer
- Diagnosed in 2017,
- Exhausted Standard of care treatment
- MD discussed the clinical trial option for phase 1

Oncology Clinical Trials Nurse Competencies:

- Oncology nursing society (ONS) developed the OCTN competencies to better reflect current OCTN practice.

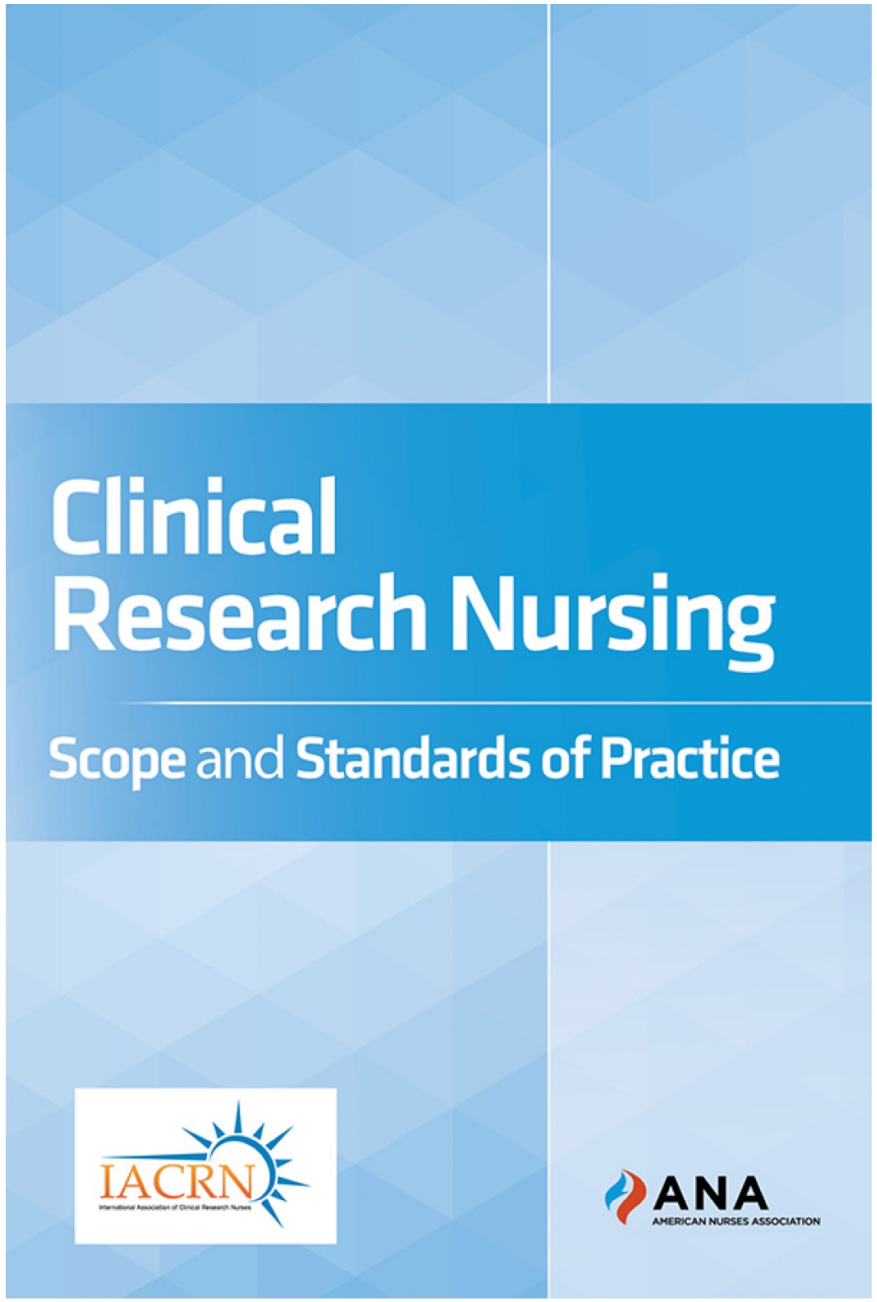
- Developed with both novice and more experienced clinical trial nurses in mind, these competencies can help individuals and organizations address role standardization and advancement while providing a resource for position descriptions, training materials, evaluation processes, and professional development plans.

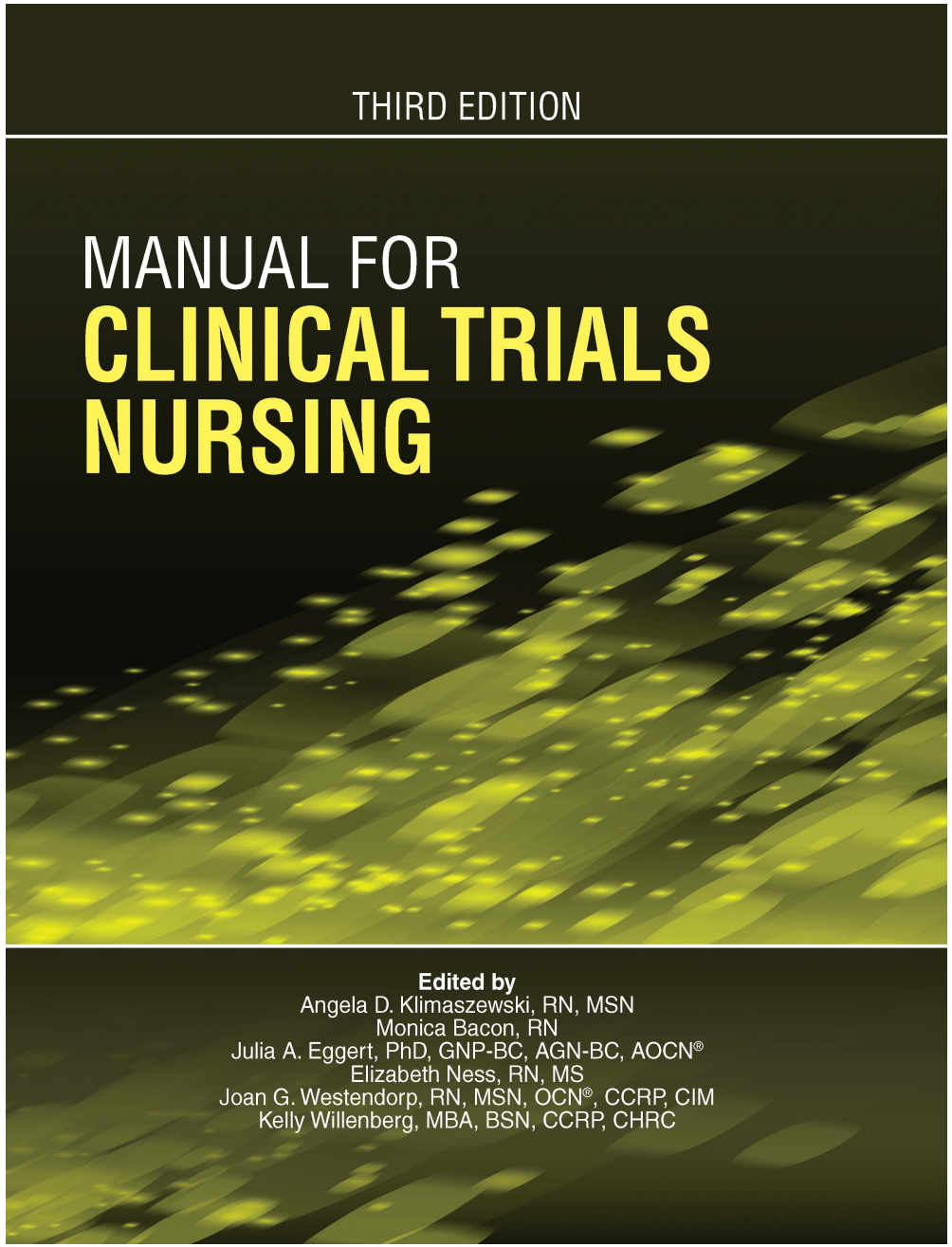
Oncology Clinical Trials Nurse Competencies:

- OCTN competencies focus on;
- The creation of an OCTN model and framework;
- Separation of required knowledge from expected behaviors
- Recommended resources to aid in knowledge and competency development.

Summary

- • The progress made in clinical trials has positively
- affected the prevention and treatment of many diseases,
- including cancer.
- • Factors that have influenced the way in which clinical
- trials are conducted include medical and surgical
- advances, development of new drugs and devices,
- application of statistical techniques to research studies,
- recognition of the need for regulation, and development
- of ethical codes.
- • The focus today is not only the treatment and prevention
- of cancer but also symptom management and
- quality of life, genomics, personalized medicine, and
- biospecimens.






HOW THE IRB MEMBERS SEE THEMSELVES:
THE BELMONT REPORT
45 CFR 46
APPROVED
SPONSOR
Don Mayne

References

- www.ONS.com
- www.FDA.com
- https://clinicaltrials.gov
- https://www.cancer.gov
- *National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. (1979, April 18). The Belmont report: Ethical principles and guidelines for the protection of human subject of research. Retrieved from http://www.hhs.gov/ohrp/humansubjects/guidance/belmont.html*
- *U.S. Food and Drug Administration. (2022). Guidance for industry E6 good clinical practice: Consolidated guidance. Retrieved from http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM073122.pdf*
- *Repucci, N. (2012). A step-by-step checklist for conducting a clinical trial Medicare coverage analysis. Medical Research Law and Policy Report, pp. 1–9. Retrieved from http://www.dentons.com/en/insights/articles/2012/october/4/a-stepbystep-checklist-for-conducting-a-clinical-trial-medicare-coverage-analysis*