# **Clinical Trials**

This learning journey is designed to introduce the various phases of clinical trials, their ethical framework, human consent, study design, and trial endpoints. Selection bias and statistical aspects are also discussed in this journey.



**Drug Development** From Discovery to Manufacture



Extract from: 'Drug development: from discovery to manufacture' Prof. Michael Kinch – Washington University in St. Louis, USA 6 mins

# Ethical framework of clinical research





Extract from: 'Historical and ethical issues in trial design' Dr. J. Rosser Matthews – University of Maryland, USA 3 min

### Elements of consent

The History and Foundations of Medical Research Ethics



Prof. Dr. Christian Lenk Institute for the History. Theory and Ethics of Medicine Ulm University, Germany

#### Extract from: 'The history and foundations of medical research ethics' Prof. Dr. Christian Lenk – Ulm University, Germany

4 mins

# Protection of human subjects

**Development and Regulation of Cellular and Gene Therapy Products: FDA** Perspective



Extract from:

'Development and regulation of cellular and gene therapy products: FDA perspective' Dr. Larissa Lapteva – Center for Biologics Evaluation and Research, FDA, USA 2 mins



#### First in human trials





Prof. Martin J. Edelman, MD, FACP Chair, Depa rtment of He Deputy Director for Clinical Research se Can

Extract from: 'Development of a cancer drug' Prof. Martin Edelman – Fox Chase Cancer Center, USA 3 mins

#### Phase 2 clinical trials





Extract from: 'Drug development: from discovery to manufacture' Prof. Michael Kinch – Washington University in St. Louis, USA 3 mins

### What is an adequate and well-controlled study?

#### **Development of** a Cancer Drug



Prof. Martin J. Edelman, MD, FACP Chair, Department of Hen ector for Clinical Research ox Chase Cancer Center iladelphia, USA

Extract from: 'Development of a cancer drug' Prof. Martin Edelman – Fox Chase Cancer Center, USA 6 mins

# Ethics and research design: preconditions for placebo

Extract from:

**Ethics and Drug Development** 

> Prof. Dr. Christian Lenk Institute for the History. Theory and Ethics of Medicine

Ulm University, Germany



'Ethics and drug development' Prof. Dr. Christian Lenk – Ulm University, Germany 5 mins

# Historical controls and trial design for rare diseases



Extract from: 'Clinical trial designs for rare diseases 1: trial designs' Dr. Anne Pariser – National Institutes of Health, USA 3 mins

#### Selection bias and randomization



Detection of and Adjustment for Selection Bias in Randomized Controlled Clinical Trials

Dr. Lieven Nils Kenne

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Extract from:

'Detection of and adjustment for selection bias in randomized controlled clinical trials' Prof. Lieven Nils Kennes - University of Applied Sciences, Germany 4 mins

#### Trial statistical aspects

### **Development of** a Cancer Drug



Prof. Martin J. Edelman, MD, FACP Chair, Department of Hernatology / O Deputy Director for Clinical Research Fox Chase Cancer Center Philadelphia, USA

Extract from: 'Development of a cancer drug' Prof. Martin Edelman – Fox Chase Cancer Center, USA 4 mins

# Endpoints in phase II trial design: response rate



ricia Tang MD FRCPC

**Phase II Trials** 

Extract from: 'Phase II trials' Dr. Patricia Tang – University of Calgary, Canada 4 mins

#### Surrogate endpoint



Extract from:

'Surrogate endpoints: from definition to meta-analytic framework 1' Prof. Geert Molenberghs – Universiteit Hasselt & KU Leuven, Belgium 2 mins

### Oncology trial endpoints

**Development of** a Cancer Drug



Prof. Martin J. Edelman, MD, FACP Chase Cancer Center ladelphia, USA

Extract from: 'Development of a cancer drug' Prof. Martin Edelman – Fox Chase Cancer Center, USA 6 mins

### Phases 3 and 4 clinical trials

**Drug Development** From Discovery to Manufacture

> te Vice Chancel gton University in St. Louis, USA



Extract from:

'Drug discovery: from discovery to manufacture' Prof. Michael Kinch – Washington University in St. Louis, USA 4 mins