



Clinical Research Trials: The Basics

There are clinical research trials for most types of cancer and all stages of the disease. Clinical trials are designed to find out the value of a treatment. Studies may be done on a worldwide level (at places of care around the world), national level (at places around the country), or at a single place of care. Studies can be designed to treat a certain stage or type of cancer. The study treatment may be the first treatment a person gets, or it could be a treatment after other treatments did not work. Trials can be used to test medicines or other treatments to prevent cancer, ways to find cancer earlier or help manage side effects. This article will help you understand the basics of clinical trials and their value in the field of oncology.

Oversight of Trials and Informed Consent

An Institutional Review Board (IRB) is a group of healthcare providers, researchers, and even people not involved in medicine. The IRB's job is to:

- Review and approve any clinical trial before it can begin.
- Make sure the study is fair, properly designed, and safe for the patients included.
- Once the study is underway, the IRB:
 - Watches for safety concerns.
 - Assures that researchers are sticking to the study plan.
 - Watches for anything that may affect the people in the study.

Anyone thinking about joining a clinical research trial must be fully informed about the trial details, benefits, and risks. This is explained during a process called informed consent. It is the duty of the study team and provider to explain the trial, in language that the participant/family members can understand. The patient should be able to have all their questions answered. This lets the patient make an educated decision about whether to take part in the trial.

The participant must sign an informed consent document to take part in a trial. This document is designed to explain the trial in clear language. It describes the risks and benefits, other choices for treatment, and the participant's right to choose not to take part in the trial. The participant may choose to think about his or her choices or review the consent with family members and friends before signing the consent form.

Why participate?

There are a few reasons to take part in a clinical trial.

- In a clinical trial, patients may have access to new treatments that would not otherwise be available.
- Clinical trials are important because they allow the field of oncology to advance, finding safer and more helpful treatments. Today's successful treatments are a result of their success in previous clinical studies.
- Unfortunately, only about 3-5% of adult cancer patients take part in clinical trials, leaving many research questions unanswered. This may be due to misunderstandings about trials (from both patient and healthcare provider perspectives), patient fears, providers not recommending a trial or not having access to trials in their treatment center.

Clinical trials are time-consuming and costly to run, making it not feasible for all places to offer them. In some cases, patients may need to ask about clinical trials in order to learn about them.

Phases of Clinical Trials

There are different types of oncology clinical trials:

- Prevention – to find ways to prevent cancer from developing.
- Diagnostic and screening – to find ways to find cancer early when it is easier to treat.
- Treatment – to find the best ways to treat cancer.
- Supportive care – to find ways to improve the quality of life for people getting cancer treatments.

These address all the steps in cancer care, looking to find the best care for each step that will result in the best results for the patient. Clinical trials are performed in the following phases, most often in this order, with each phase designed to answer set questions:

Phase I clinical trials:

- Try to find out the dose of a medicine (or other treatment) that is safe. Learn any side effects that the medicine may cause.
- Typically involves a small number of patients, often with advanced disease that standard treatments have not worked for.
- Most often involve a new or novel type of treatment.
- These studies often use a dose-escalation format. In dose escalation, the first group of patients gets a certain dose, and if it appears safe and well-tolerated, the second group of patients gets a higher dose. The dose is raised for each group of patients until the maximum tolerated dose (The highest amount of medicine a person can take before it does harm).

Phase II clinical trials:

- It involves a larger number of patients and looks to evaluate whether a treatment is effective (controls or kills cancer cells) and continues to look at the safety and tolerability of the treatment.
- Patients with a tumor for which there is not a treatment that works well are included in phase II trials. Perhaps their cancer is no longer responding to available therapies or the type of cancer does not have any useful treatments available.
- Single-agent (1 medication) or combination regimens (multiple medicines or treatments given together) may be tested in phase II trials. The goal of these studies is to make sure that the treatment is feasible, safe, and promising enough before expanding to the next phase (and a larger group of patients).

Phase III clinical trials:

- Designed to compare a study treatment to an accepted standard of care and measure things such as survival and symptom control.
- These studies are most often randomized, controlled studies, performed in multi-institutional settings, such as university and community medical centers, and involving hundreds to thousands of patients.

Phase IV clinical trials:

- Often called post-marketing studies. These studies are done once the treatment has received FDA approval and is being used in clinics. The goal of these trials is to further look at safety and effectiveness.

Can anyone take part in a trial?

Every trial is "governed" by a protocol (the trial plan). The protocol is written before the trial starts and is reviewed and approved by the IRB. It describes what the goals of the trial are, which patients and how many will be included, what treatments they will get, how they will be watched, when to stop treating a participant, and so on. This document is very detailed as is the guidebook that the study team will follow. The protocol includes the rules (criteria) a person must meet to be eligible to take part in the study. If the patient does not meet these strict rules, they will not be able to join.

Randomization

Phase II and III trials are often performed using a technique called randomization. If the patient chooses to take part in a randomized trial, a computer chooses the treatment they will get at random. The study team, provider and patient have no control over this decision and, in many trials, do not know which treatment the patient will be getting (this is called blinding). This is done to fairly compare treatments, preventing the results from being affected by "bias". Bias occurs when human choices sway a result. Perhaps choosing a certain group of patients for one treatment choice over another based on the belief that this choice is best for that group.

In a randomized trial, there is a control group and treatment (or experimental) group. The control group usually gets what is

considered the standard treatment for that type of cancer. The treatment group gets the experimental treatment being studied. Oncology clinical trials rarely use a placebo (a pill that does not contain any drug). If they do, it will be clearly described in the informed consent process and spelled out in the consent that is signed. The study team can explain the design of the trial you are interested in and how it will be carried out.

Once the Trial Starts

Once in a clinical trial, the study team will guide you as to any testing that needs to be done or anything you should tell them about - such as side effects, health issues or other concerns. You should know the name of the trial and keep a copy of your consent form handy in case you need to call your oncology office after-hours or go to an ER. If you have concerns while on the trial, talk to your study team. If for any reason, you do not want to take part in the trial any longer, it is your right to withdrawal from the study.

Summary

Clinical research studies are very important in improving treatment for all cancers. The treatments that we use today are a result of patients taking part in trials in the past. We are always trying to find better treatments to treat or cure cancer. There are also studies to find less toxic treatments, which can cut down on side effects. Clinical research trials are very rewarding for both the patient and the provider. The patient may benefit from new treatment options and, at the same time, help future cancer patients in their fight against this disease.

If you are interested in learning about clinical trials that may be right for you, talk with your oncology provider. You can also use the resources below to find more information about specific trials.

Clinicaltrials.gov - From the National Institute of Health, this site lists current clinical trials that are open to new participants who meet specific trial qualifications.

<http://www.clinicaltrials.gov>

Emerging Med Navigator - Provides telephone and online help for finding clinical trials.

<https://app.emergingmed.com/OncoLink/home>

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