What is an Investigational Device in the Context of Genomics Research?

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What is a Device?

A *device* is defined in section 201(h) of the FDCA as:

- …an instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent, or other similar or related article, including a component part, or accessory which is:
  - recognized in the official National Formulary, or the United States Pharmacopoeia, or any supplement to them,
  - intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease, in man or other animals, or
  - intended to affect the structure or any function of the body of man or other animals, and which does not achieve its primary intended purposes through chemical action within or on the body of man or other animals and which is not dependent upon being metabolized for the achievement of any of its primary intended purposes.

What is an In Vitro Diagnostic Device (IVD) ?

In vitro diagnostic devices include "…those reagents, instruments, and systems intended for use in the diagnosis of disease or other conditions, including a determination of the state of health, in order to cure, mitigate, treat, or prevent disease or its sequelae. Such products are intended for use in the collection, preparation, and examination of specimens taken from the human body. These products are devices as defined in section 201(h) of the Federal Food, Drug, and Cosmetic Act " (21 CFR § 809.3)

What is an Investigation?

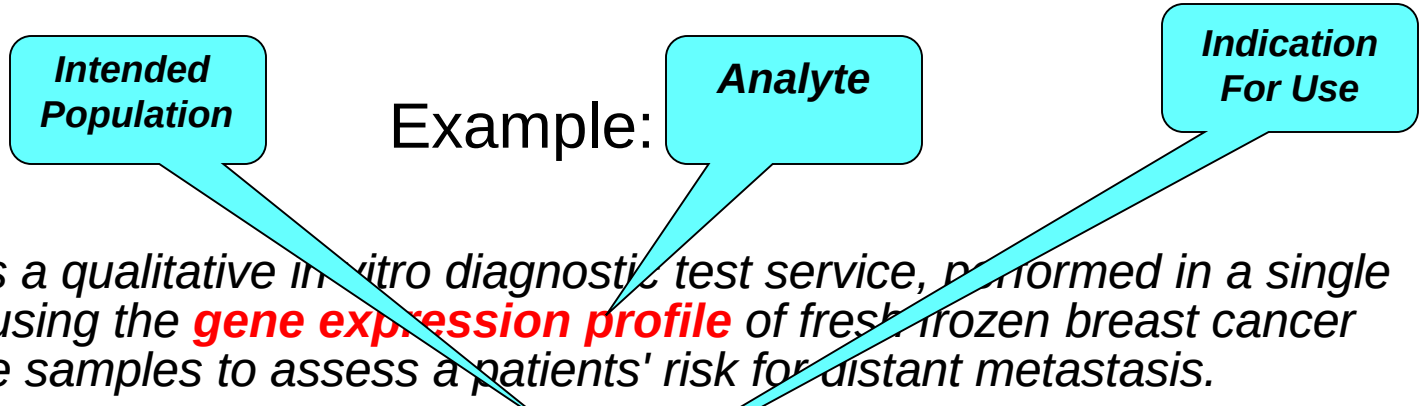
Investigation means a clinical investigation or research involving one or more subjects to determine the safety or effectiveness of a device.

What is a Subject in an Investigation?

Subject means a human who participates in an investigation, either as an individual on whom or on whose **specimen** an investigational device is used or as a control. A subject may be in normal health or may have a medical condition or disease.

What is the Intended Use of the Device?

What the device measures, how to use results



Example:

*MammaPrint® is a qualitative in vitro diagnostic test service, performed in a single laboratory, using the **gene expression profile** of fresh frozen breast cancer tissue samples to assess a patients' risk for distant metastasis.*

*The test is performed for **breast cancer patients** who are less than 61 years old, with Stage I or Stage II disease, with tumor size <= 5.0 cm and who are lymph node negative. The MammaPrint® result is indicated for use **by physicians** as a **prognostic marker** only, along **with other clinicopathological factors**.*

What is an Investigational Device?

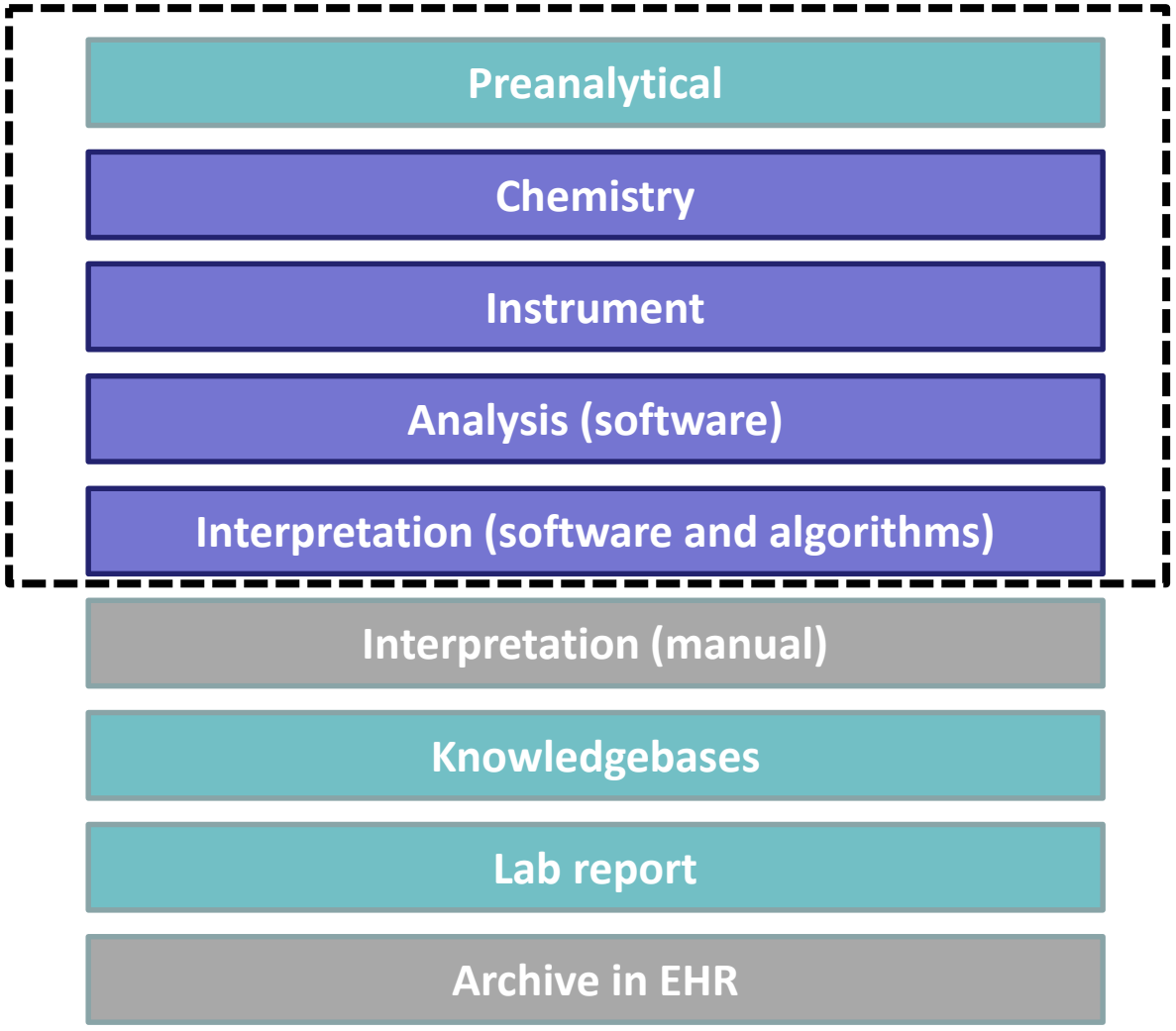
- *Investigational device* means a device…that is the object of an investigation.
- An investigational IVD is not legally marketed for the intended use or indication for use identified in that study, whether or not it has been previously cleared or approved for a separate intended use.
- Important to distinguish from off-label use or practice of medicine.
- Investigational use requires an exemption from premarket approval requirements for new drugs and devices.

Things that are or can be medical devices include:

- Instrumentation
- In vitro diagnostic kits
- Reagents used for laboratory testing
- Some apps
- Software

Medical devices are subject to regulatory requirements even though they may only be investigational.

What is an "NGS test"?



When is someone an Investigator?

The *Investigator* is the individual who actually conducts a clinical investigation, i.e., under whose immediate direction the test article is administered or dispensed to, or used involving, a subject, or, in the event of an investigation conducted by a team of individuals, is the responsible leader of that team.

When is someone a Sponsor?

The *Sponsor* is the person who initiates, but who does not actually conduct, the investigation, that is, the investigational device is administered, dispensed, or used under the immediate direction of another individual. A person other than an individual that uses one or more of its own employees to conduct an investigation that it has initiated is a sponsor, not a sponsor-investigator, and the employees are investigators.

When is someone a Sponsor-Investigator?

The *sponsor-investigator* is the individual who both initiates and actually conducts, alone or with others, an investigation, that is, under whose immediate direction the investigational device is administered, dispensed, or used. The term does not include any person other than an individual. The obligations of a sponsor-investigator under this part include those of an investigator and those of a sponsor.

Who is responsible for the investigational device?

- Sponsor or
- Sponsor-Investigator

Some common misconceptions:

- It is not a test, it is a process.
- It is not an IVD if it is in the research and development stage.
- It is not an IVD if I don’t plan to market the test.
- The IDE regulation does not apply if I don’t plan to market the test.
- I have CLIA certification, so I don’t need to worry about the IDE regulation.

Pre-Submission Program

- You can meet with the FDA for nonbinding discussions and advice:
  - *before* conducting studies, including clinical trials

- The study risk determination pre-submission can be used if you want FDA to help in making the risk determination

- The earlier the better!

Guidance on the pre-submission program can be found online at:

http://www.fda.gov/downloads/medicaldevices/deviceregulationandguidance/guidancedocuments/ucm311176.pdf

Resources

- Guidance
  - IRB Responsibilities for Reviewing the Qualifications of Investigators, Adequacy of Research Sites, and the Determination of Whether an IND/IDE is Needed. http://www.fda.gov/downloads/RegulatoryInformation/Guidances/UCM328855.pdf
  - FDA Decisions for Investigational Device Exemption (IDE) Clinical Investigations. http://www.fda.gov/downloads/MedicalDevices/DeviceRegulationandGuidance/GuidanceDocuments/UCM279107.pdf
  - Significant Risk and Nonsignificant Risk Medical Device Studies. http://www.fda.gov/downloads/RegulatoryInformation/Guidances/UCM126418.pdf
  - Others at www.fda.gov
- Device Advice
  - http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/default.htm
- CDRH Learn (including information about sponsor responsibilities, investigator responsibilities, IRBs, and the Bioresearch Monitoring Program)
  - http://www.fda.gov/Training/CDRHLearn/default.htm

Questions?

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