

Use of Devices in Human Research Activities	Effective Date	
	Revisions Date	1.13.2021

1.0 **Purpose:** The purpose of this standard operating practice (SOP) is to provide guidance on submitting human research involving devices to the UMCIRB.

2.0 **Reviews Affected:**

2.1 Human research activities involving the implantation or use of devices.

3.0 **SOP:** This SOP is to ensure that human research activities involving the use of a device meet the requirements of the federal regulations. The University and Medical Center Institutional Review Board (UMCIRB) will assure that these requirements have been met when reviewing and approving research involving the use of investigational devices or approved devices for unapproved use.

Certain human research studies with devices may meet an “exempt” criteria from the US Food and Drug Administration (FDA) requirements. Although these devices may not need further FDA review, the research studies do still need to be reviewed by the IRB.

4.0 **Definitions:**

4.1 **Exempt studies** are those that are exempt from the FDA requirements for investigational devices (i.e. 21 CFR 812). Examples of exempt studies are consumer preference testing, testing of a device modification, or testing of two or more devices in commercial distribution if the testing does not collect safety or effectiveness data, or put subjects at risk.

4.1.1 Diagnostic device studies (e.g., in vitro diagnostic studies) are also exempt from the requirements of 21 CFR Part 812 under certain circumstances. The study is exempt as long as the sponsor complies with the requirements for labeling, and if the testing: (i) is noninvasive; (ii) does not require an invasive sampling procedure that presents significant risk; (iii) does not by design or intention introduce energy into a subject; and (iv) is not used as a diagnostic procedure without confirmation of the diagnosis by another, medically established diagnostic product or procedure.

4.2 An **Implant** is a device that is placed into a surgically or naturally formed cavity of the human body if it is intended to remain there for a period of 30 days or more. The FDA may, in order to protect public health, determine that devices placed in subjects for shorter periods are also “implants”.

4.3 **Noninvasive**, when applied to a diagnostic device or procedure, means one that does not by design or intention: (1) Penetrate or pierce the skin or mucous membranes of the body, the ocular cavity, or the urethra, or (2) enter the ear beyond the external auditory canal, the nose beyond the nares, the mouth beyond the pharynx, the anal canal beyond the rectum, or the vagina beyond the cervical os. Blood sampling that involves simple venipuncture is considered noninvasive, and the use of surplus samples of body fluids or tissues that are left over from samples taken for non-investigational purposes is also considered noninvasive.

- 4.4** An **Investigational device** is a device, including a transitional device, that is the object of an investigation.
- 4.5** **Investigational Device Exemption (IDE)** supports research to be conducted on a device for a Pre-Market Approval application by permitting a device to be shipped lawfully for the purpose of conducting investigations of that device.
- 4.6** **510 (k) Devices** are substantially equivalent to other devices that are legally on the market and can be marketed without clinical testing.
- 4.7** **Significant Risk (SR) Device** is an investigational device that:
- 4.7.1** Is intended as an implant and presents a potential for serious risk to the health, safety, or welfare of a subject;
 - 4.7.2** Is purported or represented to be for a use in supporting or sustaining human life and presents a potential for serious risk to the health, safety, or welfare of a subject;
 - 4.7.3** Is for a use of substantial importance in diagnosing, curing, mitigating, or treating disease, or otherwise preventing impairment of human health and presents a potential for serious risk to the health, safety, or welfare of a subject; or
 - 4.7.4** Otherwise presents a potential for serious risk to the health, safety, or welfare of a subject.
- 4.8** **Non-Significant Risk (NSR) Device** is an investigational device that does not meet the definition of a SR study.
- 4.8.1** Unless otherwise notified by FDA, an investigation of a nonsignificant risk device is considered to have an approved IDE if the sponsor fulfills the abbreviated requirements of the IDE regulations. These regulations require, in part, that UMCIRB approval be obtained and maintained throughout the investigation and that informed consent be obtained and documented.
- 4.9** **Sponsor-Investigator** is an individual who both initiates and conducts an investigation, and under whose immediate direction the investigational drug, device or biologic is administered or dispensed. The term does not include any person other than an individual. The requirements applicable to a sponsor-investigator under this part include both those applicable to an investigator and a sponsor.
- 4.10** **Sponsor** is an entity who takes responsibility for and initiates a clinical investigation. The sponsor may be an individual or pharmaceutical company, governmental agency, academic institution, private organization, or other organization. The sponsor does not actually conduct the investigation unless the sponsor is a sponsor-investigator. 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.
- 4.11** **Off-Label Use** is use of an approved device for a non-approved indication.
- 4.11.1** Off-label use of a marketed product in this manner when the intent is solely the practice of medicine does not require IRB review or the submission of an IDE.
 - 4.11.2** Off-label use of a marketed product in research (i.e., as part of a systematic investigation designed to develop or contribute to generalizable knowledge) does require IRB review.
 - 4.11.3** Off-label use of a marketed product intended to support a change in labeling requires both IRB review and submission of an IDE.

4.12 Transitional devices are devices that were regulated as drugs prior to May 28, 1976, the date the Medical Device Amendments were signed into law. Any device that was approved by the New Drug Application process is now governed by the Premarket approval (PMA) regulations.

5.0 Responsibilities:

5.1 Investigator: Under FDA regulations, the investigator in a clinical investigation is responsible for the conduct of the study and for leading the team of individuals coordinating the study. These responsibilities include:

- 5.1.1** Obtaining IRB approval and providing documentation of IDE for significant risk studies or rationale for determination of non-significant risk devices.
- 5.1.2** Complying fully with the federal regulations, state and local laws and all IRB decisions.
- 5.1.3** Supervising the use and disposition of the device.
- 5.1.4** Carrying out the research study per the IRB approved plan/protocol.
- 5.1.5** Disclosing relevant financial information that may require conflict of interest management.
- 5.1.6** If a physician uses a product for an indication not included in the approved labeling (i.e., off-label), they have the responsibility to be well informed about the product, to base its use on firm scientific rationale and on sound medical evidence, and to maintain records of the product's use and effects. However, if intended solely for the practice of medicine, UMCIRB approval review is not required.

5.2 Sponsor-Investigators: Sponsor-investigators must:

- 5.2.1** Demonstrate and document in the IRB application their knowledge of the additional responsibilities associated with being the holder of the IDE as set forth in FDA regulations.
- 5.2.2** Be responsible for all requirements of both the investigator and the sponsor.

5.3 Sponsors: Sponsors are responsible for:

- 5.3.1** Selecting qualified investigators.
- 5.3.2** Providing the study team with the information they need to conduct the investigation properly.
- 5.3.3** Ensuring proper monitoring of the investigation.
- 5.3.4** Ensuring that IRB review and approval are obtained.
- 5.3.5** Submitting an IDE application to FDA.
- 5.3.6** Ensuring that any reviewing IRB and FDA are promptly informed of significant new information about an investigation.
- 5.3.7** Selecting monitors qualified by training and experience to monitor the investigational study in accordance with FDA regulations.
- 5.3.8** Informing investigators and supplying all investigators participating in the investigation with copies of the investigational plan and the report of prior investigations of the device.
- 5.3.9** Securing compliance.

- 5.3.10 Immediately conducting an evaluation of any unanticipated adverse device effect.
- 5.3.11 Maintaining accurate, complete, and current records relating to investigation:
 - 5.3.11.1 All correspondence with another investigator, an IRB, the sponsor, a monitor, or FDA, including required reports.
 - 5.3.11.2 Records of receipt, use or disposition of a device that relate to:
 - 5.3.11.2.1 The type and quantity of the device, the dates of its receipt, and the batch number or code mark.
 - 5.3.11.2.2 The names of all persons who received, used, or disposed of each.
- 5.4 **UMCIRB staff** are responsible for:
 - 5.4.1 Confirming the device has an IDE number that is valid by assuring consistency across documents (e.g., FDA letters, sponsor protocol, etc.), when applicable.
 - 5.4.2 Assisting sponsor-investigators in determining whether an IDE is required.
- 5.5 **UMCIRB Responsibilities:** IRB is responsible for applying all federal regulations applicable to the research use of investigational devices in humans by:
 - 5.5.1 Determining whether the device presents significant or nonsignificant risk by reviewing:
 - 5.5.1.1 The risk determination based on the proposed use of a device in an investigation and not on the device alone
 - 5.5.1.2 The nature of harm that may results from the use of the device
 - 5.5.1.3 Potential harm the procedures could cause as well as the potential harm caused by the device
 - 5.5.2 Using the same criteria it would use in considering approval of any research involving an FDA-regulated product.
 - 5.5.3 Ensuring that investigators who serve as sponsor-investigator document awareness of the responsibilities of both the sponsor and the investigator.
 - 5.5.4 Being aware that first in human device studies may warrant a more frequent continuing review approval period or other method of continuing review interval appropriate to the risk.

Revision History:

Date	Change	Reference Section(s)
4.11.2016	Pulled information to a stand-alone document.	All
6.26.2017	Clarification of Exempt device study requirements; minor editorial changes; addition of first in human IRB review information	1.0, 3.0, 4.0, 5.5.4
1.13.2021	Update office name; clarify UMCIRB committee responsibility for sponsor-investigators.	5.4, 5.5

References:

US Food and Drug Administration: Investigational Device Exemptions [21 CFR 812](#)

US Food and Drug Administration: Information Sheet Guidance for IRBs, Clinical Investigators, and Sponsors. Significant Risk and Nonsignificant Risk Medical Device Studies. January 2006. <http://www.fda.gov/downloads/RegulatoryInformation/Guidances/UCM126418.pdf>

[Understanding FDA Regulatory Requirements for an Investigational Device Exemption \(IDE\) for Sponsor-Investigators](#). M. E. Blair Holbein, Jelena Petrovic Berglund. J Investig Med. Author manuscript; available in PMC 2013 Oct 1. Published in final edited form as: J Investig Med. 2012 Oct; 60(7): 987–994. doi: 10.231/JIM.0b013e318262df40. PMID: PMC3448842

US Food and Drug Administration. Investigational Device Exemptions (IDEs) for Early Feasibility Medical Device Clinical Studies, Including Certain First in Human (FIH) Studies. October 1, 2013. <https://www.fda.gov/downloads/medicaldevices/deviceregulationandguidance/guidancedocuments/ucm279103>

US Food and Drug Administration: Information Sheet Guidance for IRBs, Clinical Investigators, and Sponsors. Frequently Asked Questions About Medical Devices. January 2006. <https://www.fda.gov/downloads/RegulatoryInformation/Guidances/UCM127067.pdf>