INVESTIGAÇÃO CLÍNICA E ESTUDOS DE DESEMPENHO DE DISPOSITIVOS

DA TEORIA À PRÁTICA

SESSÕES DE FORMAÇÃO

Uma iniciativa AICIB

Em parceria com

NOVA MEDICAL SCHOOL · Infarmed · CEIC · apormed

Webinar

Desenvolvimento da Brochura do Investigador: Dispositivos Médicos e Dispositivos Médicos para diagnóstico in vitro

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Particularidades da Brochura do Investigador para Dispositivo Médico

Cyril Martins / Clinical Territory Manager
Abbott Medical

Particularidades da BI para Dispositivo Médico

Applicable documents

1. ISO 14155:2020, *Clinical investigation of medical devices for human subjects: Good clinical practice – Annex B*

2. REGULATION (EU) 2017/745 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 5 April 2017, Annex XV, Chapter 2, Section 2

3. Lei da Investigação Clínica nº 21/2014 de 16 de Abril e DL nº145/2009

Particularidades da BI para Dispositivo Médico

Introdutory notes

- The purpose of the IB is to provide the investigators with sufficient data on safety and performance of the investigational device, from pre-clinical testing or clinical investigations to justify human exposure to the investigational device.

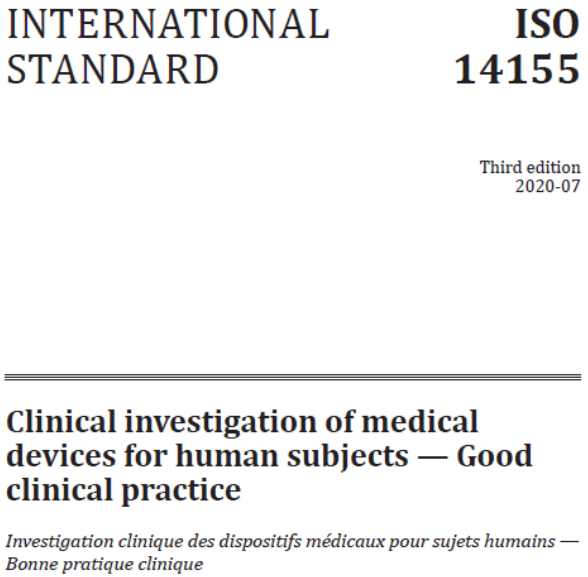
- IB is not expected in all clinical investigations

- The information may be provided in different documents or in different formats

- Where the harmonized Standard EN ISO 14155:2011 is not followed or only partly followed, a justification for that and for the alternative solutions taken should be provided.

Particularidades da BI para Dispositivo Médico

Estrutura ISO 14155


INTERNATIONAL STANDARD

ISO 14155

Third edition
2020-07

Clinical investigation of medical devices for human subjects — Good clinical practice

Investigation clinique des dispositifs médicaux pour sujets humains — Bonne pratique clinique

B1 - GENERAL

B2 - INVESTIGATIONAL DEVICE INFORMATION

B3 - PRE-CLINICAL TESTING

B4 - EXISTING CLINICAL DATA

B5 - RISK MANAGEMENT OF THE INVESTIGATIONAL DEVICE

B6 - REGULATORY AND OTHER REFERENCES

Particularidades da BI para Dispositivo Médico

Estrutura ISO 14155

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Particularidades da BI para Dispositivo Médico

B2. INVESTIGATIONAL DEVICE INFORMATION

1. *Summary of the Literature and Evaluation*
2. *Device Classification*
3. *Device Description, Device Components and Materials*
4. *Manufacturing Processes and Controls*
5. *Mechanism of Action*
6. *Intended Indication for Use*

Particularidades da BI para Dispositivo Médico

B2. INVESTIGATIONAL DEVICE INFORMATION

1. *Summary of the Literature and Evaluation*

- Rationale for design and intended use of Investigational device

ISO 14155:2020: Annex B, 2a
EU MDR: Annex XV, 2.4

Particularidades da BI para Dispositivo Médico

QUESTÃO 1

De acordo com a ISO 14155, a informação requerida na Brochura do Investigador é focada unicamente no Dispositivo sob Investigação?

1. Sim
2. Não

Particularidades da BI para Dispositivo Médico

QUESTÃO 1:

De acordo com a ISO 14155, a informação requerida na Brochura do Investigador é focada unicamente no Dispositivo de Investigação?

1. **Não**

Particularidades da BI para Dispositivo Médico

B2. INVESTIGATIONAL DEVICE INFORMATION

2. Device Classification

- Include a statement concerning the regulatory classification, risk classification and applicable classification rule of the investigational device, if relevant.
- Classification under the Medical Device Regulation

The devices that comprise the XY System are a combination of Class III (X) and Class I (Y) per **Rule 1**, **Rule 6**, **Rule 8,** and **Rule 18** of Annex VIII of the REGULATION (EU) 2017/745.

X device

Rule 8: All implantable devices and long term surgically invasive devices are classified as class IIb unless they:

- Are intended to be used in direct contact with the heart, the central circulatory system, or the central nervous system, in which case they are classified as **Class III**.

Rule 18: All devices manufactured utilizing tissue or cells of human or animal origin, or their derivatives, which are non-viable or rendered non-viable, are classified as **Class III**, unless such devices are manufactured utilizing tissue or cells of animal origin, or their derivatives, which are non-viable or rendered non-viable and are devices intended to come into contact with intact skin only.

Y Device

Rule 1: All non-invasive devices are classified as **Class I**, unless one of the rules set out hereinafter applies.

ISO 14155:2020: Annex B, 2b, 2c
EU MDR: Annex XV, 2.1

Particularidades da BI para Dispositivo Médico

B2. INVESTIGATIONAL DEVICE INFORMATION

3 Device Description, Device Components and Materials

- Enter the description of the investigational device, its component(s) and materials. Include any necessary figures and tables.

- A summary of relevant physical, chemical, toxicological and design of the MD, components and materials. Reference previous and similar generations of the device.

ISO 14155:2020: Annex B, 2c
EU MDR: Annex XV, 2.1

Particularidades da BI para Dispositivo Médico

B2. INVESTIGATIONAL DEVICE INFORMATION

4. Manufacturing Processes and Controls

- Summary of relevant manufacturing processes and relevant validation processes, to demonstrate that the investigational devices are manufactured or verified under a controlled process according to the applicable regulations.

ISO 14155:2020: Annex B, 2d, 2f
EU MDR: Annex XV, 2.2

Particularidades da BI para Dispositivo Médico

B2. INVESTIGATIONAL DEVICE INFORMATION

5. *Mechanism of Action*

- Description of the mechanism of action of the investigational device, along with supporting scientific literature.

ISO 14155:2020: Annex B, 2e

Particularidades da BI para Dispositivo Médico

B2. INVESTIGATIONAL DEVICE INFORMATION

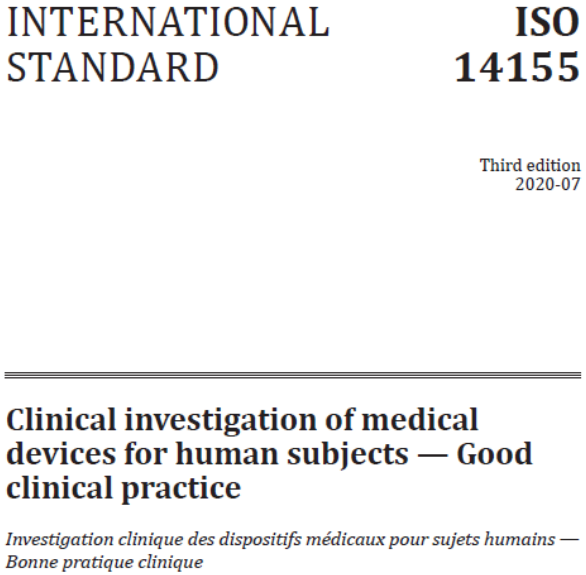
6. Intended Indication for use

- copy of device(s) labels and IFU(s), including risks, contraindications and warnings (if available);

ISO 14155:2020: Annex B, 2g
EU MDR: Annex XV, 2.5

Particularidades da BI para Dispositivo Médico

Estrutura ISO 14155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Particularidades da BI para Dispositivo Médico

B3. PRE-CLINICAL EVALUATION

Include a summary of the pre-clinical testing and experimental data that has been performed on the investigational device, together with an evaluation of the results of such testing justifying its use in human subjects.

Particularidades da BI para Dispositivo Médico

B3. PRE-CLINICAL EVALUATION

1. *Engineering Testing*
2. *Animal Testing*
3. *Biocompatibility Testing*
4. *Software and System Verification and Validation*
5. *Procedures for cleaning, disinfection, or sterilization*
6. *Additional Information Required for Specific Cases*

Particularidades da BI para Dispositivo Médico

B3. PRE-CLINICAL EVALUATION

1. *Engineering Testing*

- Dimensional Testing
- Mechanical Testing
- Reliability Testing
- Electrical Testing

ISO 14155:2020: Annex B, 3a, 3c, 3d
EU MDR: Annex XV, 2.3

Particularidades da BI para Dispositivo Médico

B3. PRE-CLINICAL EVALUATION

2. Animal Testing

- Discussion and justification for the animal model used, if applicable.
- include number of animals per group, devices used, and duration of exposure
- Conformity with Directive 2004/10/EC (GLP) – if not applicable, provide justification

ISO 14155:2020: Annex B, 3h
EU MDR: Annex XV, 2.3

Particularidades da BI para Dispositivo Médico

QUESTÃO 2

Qual o documento orientador que fornece as principais diretrizes sobre a avaliação de biocompatibilidade de Dispositivos Médicos:

1. ISO 14155 – Boas Práticas Clínicas
2. ISO 10993 - Avaliação Biológica de Dispositivos Médicos
3. ISO/IEC 17025 - Requisitos gerais para a competência de laboratórios de ensaio e calibração
4. Regulamento (UE) 2017/145, de 5 de abril de 2017 relativo aos Dispositivos Médicos (RDM) - Secção 2, Capitulo 2 do anexo XV

Particularidades da BI para Dispositivo Médico

QUESTÃO 2

Qual a Guideline que fornece as principais orientações sobre a avaliação de biocompatibilidade de Dispositivos Médicos:

2. ISO 10993 - Avaliação Biológica de Dispositivos Médicos

Particularidades da BI para Dispositivo Médico

B3. PRE-CLINICAL EVALUATION

3. Biocompatibility Testing

- Identify all materials in direct or indirect contact with the patient or user.
- Include description of physical, chemical and microbiological characterization of the device.
- Summarize the appropriate testing conducted per ISO 10993-1

Citotoxicity	Sensitization	Irritation or intracutaneos reactivity	Systematic toxicity
Subchronic toxicity	Chronic toxicity	Implantation effects	Hemocompatibility
Genotoxicity	Carcinogenicity	Reproductive/development toxicity	Degradation

ISO 14155:2020: Annex B, 3b, 3f, 3g, 3i
EU MDR: Annex XV, 2.3

Medical device categorization by			Endpoints of biological evaluation														
Nature of body contact		Constant duration	Physical and/or Chemical information	Cytotoxicity	Sensitization	Irritation or Intracutneous reactivity	Material mediated pyrogenicity	Acute systemic toxicity	Subacute toxicity	Subchronic toxicity	Chronic toxicity	Implantation effects	Hemocompatibility	Genotoxicity	Carcinogenicity	Reproductive / developmental toxicity	Degradation
Category	Contact	A – limited (≤24 h) B – prolonged (>24 h to 30 d) C – long term (> 30 d)															
Surface Medical device	Intact skin	A	X	E	E	E											
		B	X	E	E	E											
		C	X	E	E	E											
	Mucosal membrane	A	X	E	E	E											
		B	X	E	E	E		E	E			E					
		C	X	E	E	E		E	E	E	E	E		E			
	Breached or compromised surface	A	X	E	E	E	E	E									
		B	X	E	E	E	E	E	E			E					
		C	X	E	E	E	E	E	E	E	E	E		E			
Externally communicating medical device	Blood path, indirect	A	X	E	E	E	E	E					E				
		B	X	E	E	E	E	E	E				E				
		C	X	E	E	E	E	E	E	E	E	E	E	E	E		
	Tissue / bone / dentin	A	X	E	E	E	E	E									
		B	X	E	E	E	E	E	E			E		E			
		C	X	E	E	E	E	E	E	E	E	E		E	E		
	Circulating blood	A	X	E	E	E	E	E					E	E			
		B	X	E	E	E	E	E	E			E	E	E			
		C	X	E	E	E	E	E	E	E	E	E	E	E	E		
Implant Medical device	Tissue / bone	A	X	E	E	E	E	E									
		B	X	E	E	E	E	E	E			E		E			
		C	X	E	E	E	E	E	E	E	E	E		E	E		
	Blood	A	X	E	E	E	E	E				E	E	E			
		B	X	E	E	E	E	E	E			E	E	E			
		C	X	E	E	E	E	E	E	E	E	E	E	E	E		

X – means prerequisite information needed for a risk assessment

E – means endpoints to be evaluated in the risk assessment

Particularidades da BI para Dispositivo Médico

B3. PRE-CLINICAL EVALUATION

3. Biocompatibility Testing

- Reference all relevant test reports
  - ✓ Biological endpoint & ISO standard
  - ✓ Test Method
  - ✓ Device Tested
  - ✓ Extraction Conditions
  - ✓ Acceptance criteria
  - ✓ Results (Pass/Fail)

- Other appropriate testing to assess if applicable (ex. American Society for Testing and Materials F2475-11)

Particularidades da BI para Dispositivo Médico

B3. PRE-CLINICAL EVALUATION

4. Software and System Verification and Validation

- Describe the software design and development process and evidence of the validation of the software, as used in the finished device.
- Summarize the results of all verification, validation and testing performed both in-house and in a simulated or actual user environment prior to final release.
- Address all the different hardware configurations and, where applicable, operating systems identified in the information supplied, e.g. instructions for use.

ISO 14155:2020: Annex B, 3e
EU MDR: Annex XV, 2.3

Particularidades da BI para Dispositivo Médico

B3. PRE-CLINICAL EVALUATION

5. Procedures for cleaning, disinfection, or sterilization

- Identify which parts of the device / system are provided non-sterile, sterile single-use, sterile-reusable, non-sterile to be sterilized by the end user.
- In the case of devices placed on the market in a sterile condition, a description of the methods used, including the validation report(s), with respect to packaging, sterilization and maintenance of sterility. The validation report shall address bioburden testing, pyrogen testing and, if applicable, testing for sterilant residues.
- For multi-use devices, describe information and validation reports related to cleaning and disinfection. Also include, as applicable, reprocessing instructions.

ISO 14155:2020: Annex B, 3j
EU MDR: Annex XV, 2.3

Particularidades da BI para Dispositivo Médico

B3. PRE-CLINICAL EVALUATION

6. Additional Information Required for Specific Cases

- EU MDR requires providing a summary of relevant for the contents of additional information:
  - ✓ Device Incorporating a Medicinal Substance
  - ✓ Device Manufactured Utilizing Tissues or Cells of Human or Animal Origin or Derivatives
  - ✓ Devices Composed of Substances Introduced into the Human Body

EU MDR: Annex I: 13.1, 13.2; Annex XV: 2.6, 5.2; Annex XIV: 5.2, 5.3, 5.4

Obrigado!

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