

Evaluation of strategies for adopting different NGS panels for patients with AML

This questionnaire was prepared as part of the master's thesis in Biomedical Engineering of the student Susana Henriques Afonso, resulting from a collaboration between the Instituto Superior Técnico (IST) and IPO Lisboa. This study has been developed under the guidance of Prof. Mónica Oliveira (IST) and Dr. Carla Pereira (IPO), and with the support of a team from the hematology department consisting of Dr. Joana Desterro, Dr. Lara Neto, and Dr. Paula Gameiro.

The aim of the study is to help evaluate the best strategy to adopt for carrying out NGS tests on patients with acute myeloid leukemia (AML). Thus, this questionnaire was designed to extend the collection of opinions on this topic to other health professionals at IPO.

The questionnaire takes a maximum of 12 minutes to answer, and you can go back and move between sections at any time. All information collected will be kept confidential, and used only within the scope of this study. Thank you in advance for your participation.

** Indica uma pergunta obrigatória*

1. Please indicate your role at IPO *

2. Do you agree that your answers will be used for the purpose of this study? *

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Yes

No



Context

In the first few days after a patient is admitted to IPO with suspected AML, several tests are performed to confirm their diagnosis and determine the best therapy to adopt.

In some cases, an NGS test is performed later to, for example, confirm the patient's risk group, select more effective therapies, and identify molecular targets that can be monitored to track the disease's progression.

The aim of this study is to help assess the best strategy to adopt for conducting NGS tests on patients with AML, by constructing a Decision Support Model. To this end, 5 criteria have been defined that will be considered in this analysis, which you can see in the figure below

Selected criteria for this study

	Critério	Breve descrição
Value of the genomic panel for the patient 	Clinical relevance of the genomic panel	Number and relevance of the analyzed genomic variations.
	Time to access the results	Time between procedures and results.
Value for IPO and its stakeholders 	Usability for the health professional	Ease of use and need for training.
	Resources optimization	Human resources and infrastructure required.
	Knowledge improvement	Access to information (access to sample, raw data, and its interpretation).

In the next sections, you will be asked to evaluate different performances within each criterion, always keeping in mind that the ultimate goal is the improvement of health care delivery to AML patients using precision medicine.

Criterion 1: Clinical Relevance of the Genomic Panel

To evaluate the performance of an NGS test in the criterion 'Clinical Relevance of the Genomic Panel', we will consider the number of genes analyzed, as well as their relevance in patients with AML. For this purpose, imagine that you have 3 NGS tests with different performance levels in this criterion. The following figure shows these performance levels (1, 2, and 3), and possible improvements between them:

Level 1 - The panel analyzes variations in the DNA of 406 genes and in the RNA of 265 genes, targeted at hematological pathologies (not restricted to myeloid pathologies such as AML).

Level 2 - The panel analyzes variations in the DNA of a personalized number of genes, targeted at myeloid pathologies.

Level 3 - The panel looks at variations in the DNA of 54 genes, often mutated in patients with myeloid pathology.



3. Indicate the attractiveness of each of the improvements presented, in relation to the number and relevance of the genes included in the panel. *

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	Null	Very weak or weak	Moderate	Strong or Very Strong	Extreme	I do not know / I do not want to answer
Improvement from Level 3 to Level 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvement from Level 3 to Level 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvement from Level 2 to Level 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Criterion 2: Time to Access the Results

4. To evaluate the performance of an NGS panel in the criterion 'Time to Access Results', * we will consider the time elapsed between sample collection and obtaining the results, which typically varies between 2 to 4 weeks. Indicate the attractiveness of each of the improvements presented (i.e., reducing the time to access the results as presented):



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	Null	Very Weak or Weak	Moderate	Strong or Very Strong	Extreme	I do not know / I do not want to answer
Improvement from 4 weeks to 2 weeks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvement from 4 weeks to 3 weeks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvement from 3 weeks to 2 weeks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Criterion 3: Usability for the health professional

To evaluate performance in the criterion 'Usability for Health Professionals', we will consider the ease of the process and the need for training of health professionals in the event of its adoption. For this purpose, imagine that you have 3 NGS tests with different performance levels in this criterion. The following figure shows these performance levels (1, 2, and 3), and possible improvements between them:

Level 1 - The process is easy and simple to interpret, and no training is required to use it.

Level 2 - The process is easy and simple to interpret, requiring initial training to use it.

Level 3 - The process is easy, although sometimes it is difficult to interpret, and only some specific training is needed to use it.



5. Indicate the attractiveness of each of the improvements presented, in relation to the ease of the process and the need for training health professionals. *

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	Null	Very weak or weak	Moderate	Strong or Very Strong	Extreme	I do not know / I do not want to answer
Improvement from Level 3 to Level 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvement from Level 3 to Level 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvement from Level 2 to Level 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Criterion 4: Resource Optimization

To evaluate performance in the criterion 'Resource Optimization', we will consider the institution's capacity in terms of infrastructure and human resources to adopt this strategy. For this purpose, imagine that you have 3 NGS tests with different performance levels in this criterion. The following figure shows these performance levels (1, 2, and 3), and possible improvements between them:

Level 1 - Does not require the use of infrastructure. At least 2 people are required throughout the process.

Level 2 - Requires the use of infrastructures currently available within the institution, and at least 4 people throughout the process.

Level 3 - Requires the use of more infrastructure than currently within the institution, and at least 4 people throughout the process.



6. Indicate the attractiveness of each of the improvements presented, in relation to the institution's capacity to adopt a certain NGS test. *

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	Null	Very weak or weak	Moderate	Strong or Very Strong	Extreme	I do not know / I do not want to answer
Improvement from Level 3 to Level 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvement from Level 3 to Level 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvement from Level 2 to Level 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Criterion 5: Knowledge improvement

To evaluate performance in the criterion 'Knowledge Improvement', we will consider the amount of information accessible to IPO-L through this strategy. For this purpose, imagine that you have 2 NGS tests with different performance levels in this criterion. The following figure shows these performance levels (1 and 2):

Level 1 - The institution has full access to information (access to the sample, raw data and final results).

Level 2 - The institution does not have access to all the information (it only has access to the final results).



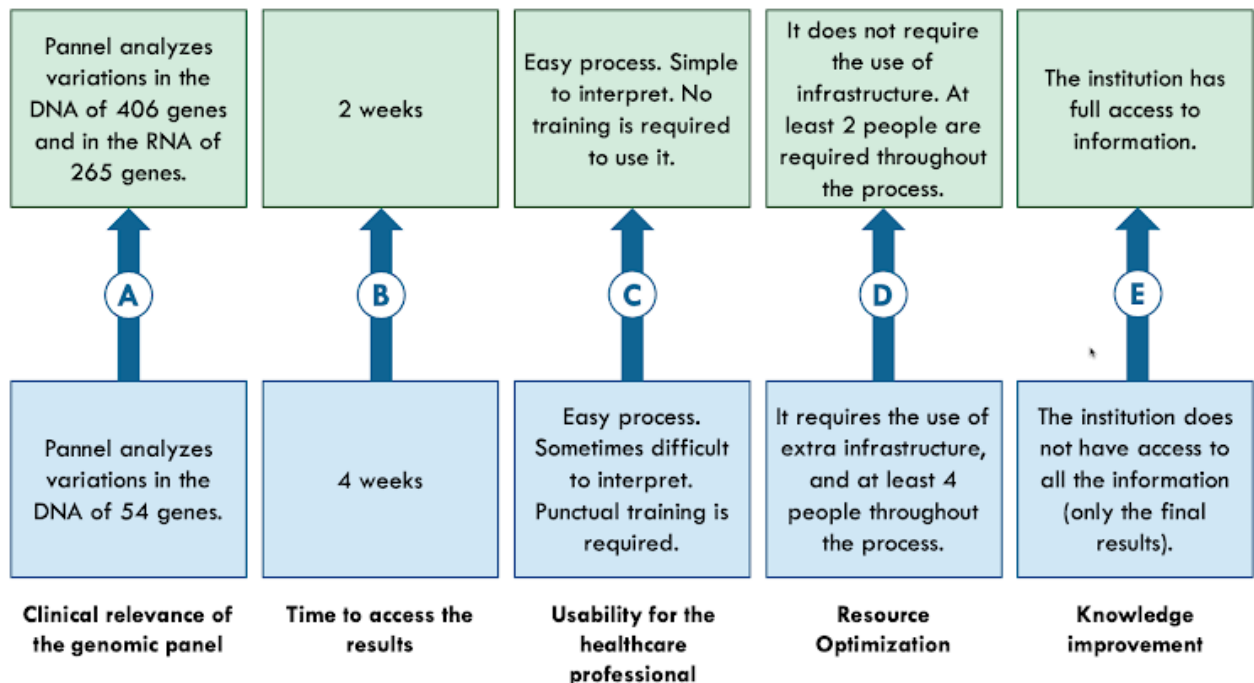
7. Indicate the attractiveness of the improvement presented, relating to access to information. *

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	Null	Very weak or weak	Moderate	Strong or Very Strong	Extreme	I do not know / I do not want to answer
Improvement from Level 2 to Level 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Ordering the Criteria

Finally, we need to order the criteria. For this, you are asked to rank which of the following improvements (A, B, C, D, and E) most contribute to the improvement of care for patients with AML, using precision medicine.



8. Order the improvements presented (A, B, C, D, and E) according to their attractiveness.

Note: you can select more than one option on each line

Marcar tudo o que for aplicável.

	A	B	C	D	E
Most attractive improvement(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2nd most attractive improvement(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3rd most attractive improvement(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4th most attractive improvement(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Less attractive improvement(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. To conclude, indicate what is, in your opinion, the contribution of each of the improvements presented to the improvement of care for patients with AML. *

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	Null	Very weak or weak	Moderate	Strong or very strong	Extreme	I don't know / I don't want to answer
Improvement A	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvement B	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvement C	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvement D	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvement E	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of survey

10. If you wish to, leave a comment regarding this study.

11. If you wish, leave your comment regarding the structure of this questionnaire.

12. Would you like to have access to the questionnaire's and study's results? *

Marcar apenas uma oval.

Yes

No

13. If you answered Yes, please write your email:

Este conteúdo não foi criado nem aprovado pela Google.

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