BreastCancer

This technology aims to give more accurate diagnosis on type of tumours that are found in the breast and then tell if it is a malignant or benign tumour so appropriate treatment can be given.

Technology Impact Cycle Tool

BreastCancer

Impact on society
What impact is expected from your technology?

This category is only partial filled.

What is exactly the problem? Is it really a problem? Are you sure?
The problem that is being solved is the reduction of misdiagnosis when it comes to breast cancer in patients so appropriate treatment is given. It also plans to speed up the diagnosing process so action is taken more quickly and doctors and health professionals do not have to spend days in trying to make a diagnosis.

Are you sure that this technology is solving the RIGHT problem?
This question has not been answered yet.

How is this technology going to solve the problem?
This question has not been answered yet.

What negative effects do you expect from this technology?
This question has not been answered yet.

In what way is this technology contributing to a world you want to live in?
This question has not been answered yet.

Now that you have thought hard about the impact of this technology on society (by filling out the questions above), what improvements would you like to make to the technology? List them below.
This question has not been answered yet.

Hateful and criminal actors
What can bad actors do with your technology?

This category is only partial filled.

In which way can the technology be used to break the law or avoid the consequences of breaking the law?
This technology can break the law in the sense of privacy because in the wrong hands, patients privacy will be infringed upon and the perpetrator will have access to the patients cancer records and what kind of cancer they have. They can be harassed when pharmaceutical companies get hold of this data and start disturbing patients with cancer drug ads.

Can fakers, thieves or scammers abuse the technology?
This question has not been answered yet.

Can the technology be used against certain (ethnic) groups or (social) classes?
This question has not been answered yet.

In which way can bad actors use this technology to pit certain groups against each other? These groups can be, but are not constrained to, ethnic, social, political or religious groups.
This question has not been answered yet.

How could bad actors use this technology to subvert or attack the truth?
This question has not been answered yet.

Now that you have thought hard about how bad actors can impact this technology, what improvements would you like to make? List them below.
This question has not been answered yet.

Privacy

Are you considering the privacy & personal data of the users of your technology?

This category is only partial filled.

Does the technology register personal data? If yes, what personal data?

This Technology does register personal data. The personal data this is going to record is the patients name and also have information on cells that have been removed from their bodies and screened for tumours.

Do you think the technology invades the privacy of the stakeholders? If yes, in what way?

This question has not been answered yet.

Is the technology is compliant with prevailing privacy and data protection law? Can you indicate why?

This question has not been answered yet.

Does the technology mitigate privacy and data protection risks/ concerns (privacy by design)? Please indicate how.

This question has not been answered yet.

In which way can you imagine a future impact of the collection of personal data?

This question has not been answered yet.

Now that you have thought hard about privacy and data protection, what improvements would you like to make? List them below.

This question has not been answered yet.

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Human values

How does the technology affect your human values?

This category is only partial filled.

How is the identity of the (intended) users affected by the technology?
This technology is not stigmatizing in any way because cancer patients are not stigmatized or shunned in our society, so anyone who comes into contact with this technology is free of stigma.

How does the technology influence the users' autonomy?
This question has not been answered yet.

What is the effect of the technology on the health and/or well-being of users?
This question has not been answered yet.

Now that you have thought hard about the impact of your technology on human values, what improvements would you like to make to the technology? List them below.
This question has not been answered yet.

Stakeholders
Have you considered all stakeholders?

This category is only partial filled.

Who are the main users/targetgroups/stakeholders for this technology? Think about the intended context by answering these questions.

Name of the stakeholder
Health Professionals

How is this stakeholder affected?
-

Did you consult the stakeholder?
No

Are you going to take this stakeholder into account?
No

Name of the stakeholder
Patients

How is this stakeholder affected?
-

Did you consult the stakeholder?
No

Are you going to take this stakeholder into account?
No

Name of the stakeholder
Hospitals

How is this stakeholder affected?
-

Did you consult the stakeholder?
No

Are you going to take this stakeholder into account?
No

Did you consider all stakeholders, even the ones that might not be a user or target group, but still might be of interest?
-

Now that you have thought hard about all stakeholders, what improvements would you like to make? List them below.
This question has not been answered yet.

Data

Is data in your technology properly used?

This category is only partial filled.

Are you familiar with the fundamental shortcomings and pitfalls of data and do you take this sufficiently into account in the technology?

I am very familiar with the pitfalls of data. The data I am using is from a reliable source which is the University of Wisconsin. I also examine the data properly. I also try and combine a data set from the University of California Irvine to verify how good the data set is.

How does the technology organize continuous improvement when it comes to the use of data?

This question has not been answered yet.

How will the technology keep the insights that it identifies with data sustainable over time?

This question has not been answered yet.

In what way do you consider the fact that data is collected from the users?

This question has not been answered yet.

Now that you have thought hard about the impact of data on this technology, what improvements would you like to make? List them below.

This question has not been answered yet.

Inclusivity
Is your technology fair for everyone?

This category is only partial filled.

Will everyone have access to the technology?
This question has not been answered yet.

Does this technology have a built-in bias?
There might be some built-in bias when it comes to racial factors, but this is in no fault of the technology but the way cancer is diagnosed, because the science in diagnosing caters to the Caucasian population more than other races so it is easier to diagnose white people than black people. But this is not my own doing but it is in regards to the bias in the medical industry.

Does this technology make automatic decisions and how do you account for them?
This question has not been answered yet.

Is everyone benefitting from the technology or only a a small group? Do you see this as a problem? Why/why not?
This question has not been answered yet.

Does the team that creates the technology represent the diversity of our society?
This question has not been answered yet.

Now that you have thought hard about the inclusivity of the technology, what improvements would you like to make? List them below.
This question has not been answered yet.

Transparency

Are you transparent about how your technology works?

This category is only partial filled.

Is it explained to the users/stakeholders how the technology works and how the business model works?

There is a deployment document that shows how this technology will be used in desktop application so all the user needs to do is input in the results and features that they received from the cells and the computer will provide a diagnosis based on that information. This will be fairly easy for health professionals since they know all about the features of a tumour.

If the technology makes an (algorithmic) decision, is it explained to the users/stakeholders how the decision was reached?

This question has not been answered yet.

Is it possible to file a complaint or ask questions/get answers about this technology?

This question has not been answered yet.

Is the technology (company) clear about possible negative consequences or shortcomings of the technology?

This question has not been answered yet.

Now that you have thought hard about the transparency of this technology, what improvements would you like to make? List them below.

This question has not been answered yet.

Sustainability

Is your technology environmentally sustainable?

This category is only partial filled.

In what way is the direct and indirect energy use of this technology taken into account?

With the technology backend being deployed on a server along with a database to store data it will have little to no impact on the environment in relation to the amount of energy it will consume to work.

Do you think alternative materials could have been considered in the technology?

This question has not been answered yet.

Do you think the lifespan of the technology is realistic?

This question has not been answered yet.

What is the hidden impact of the technology in the whole chain?

This question has not been answered yet.

Now that you have thought hard about the sustainability of this technology, what improvements would you like to make? List them below.

This question has not been answered yet.

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Future
Did you consider future impact?

This category is only partial filled.

What could possibly happen with this technology in the future?
This technology is a small step in the direction of diagnosing cancer in different parts of the body since we are starting with breast cancer. In the near future it should be able to diagnose correctly cancers in other parts of the body.

Sketch a or some future scenario (s) (20-50 years up front) regarding the technology with the help of storytelling. Start with at least one utopian scenario.
This question has not been answered yet.

Sketch a or some future scenario (s) (20-50 years up front) regarding the technology with the help of storytelling. Start with at least one dystopian scenario.
This question has not been answered yet.

Would you like to live in one of this scenario's? Why? Why not?
This question has not been answered yet.

What happens if the technology (which you have thought of as ethically well-considered) is bought or taken over by another party?
This question has not been answered yet.

Impact Improvement: Now that you have thought hard about the future impact of the technology, what improvements would you like to make? List them below.
This question has not been answered yet.