

Supplement 3.

Single PDF questionnaires

HPI 2020 Q1	2
HPI 2020 Q2	23
HPI 2020 Q3	43
HPI 2020 Q4	63
TUM Q4'	68
TUM 2020/21 Q1.....	72
TUM 2020/21 Q2.....	75
TUM 2020/21 Q3.....	78
TUM 2020/21 Q4.....	82
HPI 2021 Q1	87
HPI 2021 Q2	91
HPI 2021 Q3	94
HPI 2021 Q4	99

Questionnaire 1: Pre-Course

Analyse Your Personal Genome (AYPG)

Dear AYPG student,

The purpose of this questionnaire is to learn about your expectations of the course and your opinion regarding analyzing your own genome and genome analysis in general. In total, we will ask you to answer three consecutive questionnaires at different time points in the course.

This is the first questionnaire.

Your answers help us improve the course concept and to understand how students feel about analyzing their own genomic data.

Your participation in this questionnaire is voluntary. You may choose not to participate. If you choose to participate, you may stop at any time without any penalty. This will not affect your participation, grade, or any other aspect of your involvement in the course, or any other aspect of your education at HPI.

The procedure involves filling out a survey that will take approximately 20 minutes. Your survey data will be identified only by a random identifier; your name and other information that could identify you will not be on the questionnaires.

Please select your choice below:

- I wish to continue with the questionnaire
- I DO NOT wish to continue and want to exit

If you have any questions, concerns, or complaints at any time about this research please contact aypgtteam@lists.myhpi.de.

The questionnaire starts now, thank you for your participation.

General Information

On this page, you will find some information about the questionnaire in general.

Please read it carefully.

Regarding the question format:

- We kindly ask you to specify your answers if text fields are displayed.
- For most questions, you can select the options *I don't understand* and *I don't know*.
 - Select *I don't understand* if you do not understand the question or answer possibility.
 - Select *I don't know* if you understand the question and the answer possibilities but you cannot decide for an answer.

Throughout the questionnaire, technical terms appear that are defined as follows:

- **Genetic variations or variants:** A term used to describe the variation in the DNA sequence in each of our genomes. There are different ways that one person's DNA sequence can differ from the reference DNA sequence. The most common type are so-called single nucleotide polymorphisms (SNPs).
- **Genotyping** is the process of determining which genetic variants an individual possesses. Genotyping can be performed through a variety of different methods, depending on the variants of interest and the resources available. For looking at many different variants at once, especially common variants, **genotyping arrays** are an efficient and accurate method. However, they require prior identification of the variants of interest.
- **Sequencing** is a method used to determine the exact sequence of a certain length of DNA. You can sequence a short piece, the whole genome, or parts of the genome, such as the exome, which are the regions of the genome that contain the instructions for RNA and proteins. Depending on the region, a given stretch of sequence may include some DNA that varies between individuals, in addition to regions that are constant. Thus, sequencing can be used to genotype someone for known variants, as well as identify variants that may be unique to that person.

Note: If not stated otherwise, we refer to array technology in questions concerning genotyping.

Before You Start

As a baseline for us to evaluate your further answers, please answer the question below.

1. Please state whether you understood the following concepts:

	Definitely yes	Probably yes	Neutral	Probably no	Definitely no	I prefer not to say
Variant	<input type="radio"/>					
Genotyping	<input type="radio"/>					
Array technology	<input type="radio"/>					
Whole genome sequencing	<input type="radio"/>					
The difference between array technology and whole genome sequencing	<input type="radio"/>					

Course Motivation

We want to learn about your motivation to participate in this course.

2. Why did you enroll for the course?

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
I want to receive my own genomic data	<input type="radio"/>							
I want to learn about genome analysis	<input type="radio"/>							
I want to analyze my own data	<input type="radio"/>							
I need the credit points	<input type="radio"/>							
The course sounded interesting	<input type="radio"/>							

3. Are there other reasons why you enrolled for the course that are not covered above?

Course Expectations

We would like to know what you expect to learn in the AYPG course.

4. Please answer whether you expect to learn about the following topics.

	Definitely yes	Probably yes	Neutral	Probably no	Definitely no	I don't understand	I don't know	I prefer not to say
Genome-wide association studies	<input type="radio"/>							
Ethical implications of genome analysis	<input type="radio"/>							
Legal foundations of genome analysis in Germany	<input type="radio"/>							
Comparison of legal foundations of genome analysis in Germany to other countries	<input type="radio"/>							
Introduction to genotyping	<input type="radio"/>							
Introduction to sequencing	<input type="radio"/>							
Social implications of genome analysis	<input type="radio"/>							
Pharmacogenomics	<input type="radio"/>							
Ancestry analysis	<input type="radio"/>							
Hands-on work with genetic data	<input type="radio"/>							
Options for direct to consumer testing (in Germany and worldwide)	<input type="radio"/>							
Analyzing wellness-traits	<input type="radio"/>							
Tools to analyze and interpret (my own) genomic data	<input type="radio"/>							

5. Are there other topics you expect to learn about that are not covered above?

6. Are there topics in the context of genome analysis you do not expect to be covered but you want to learn about?

Usage of Your Own Genomic Data (1 of 3)

We would like to know whether you intend to use your own genomic data, and if so, which analyses you plan to perform.

7. Did you get yourself already genotyped outside of this course?

- Yes
- No
- I prefer not to say (because)

8. Do you plan to get yourself genotyped?

- Definitely yes
- Probably yes
- Probably no
- Definitely no
- It depends (on)
- I don't understand
- I don't know
- I prefer not to say (because)

9. Would you discuss personal genotyping with someone or not prior to getting yourself genotyped? If yes, please tell us with whom (in terms of your personal or professional relationship rather than the person's name). If no, please specify why.

10. At the present time, which of the following options would you prefer? Please check one.

- Option 1:** I would like to analyze my own genome
- Option 2:** I do **not** want to analyze my own genome and would rather analyze anonymous genomic data
- I did not make any decision yet

11. In light of your choice to analyze your own genome or not, please respond to the following statements:

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
I know which options are available to me	<input type="radio"/>							
I know the benefits of each option	<input type="radio"/>							
I know the risks of each option	<input type="radio"/>							
I am clear about which risks and benefits matter most to me	<input type="radio"/>							
I feel I have made an informed choice	<input type="radio"/>							
I expect to stick with my decision	<input type="radio"/>							
I am satisfied with my decision	<input type="radio"/>							

Usage of Your Own Genomic Data (2 of 3)

We would like to know whether you intend to use your own genomic data, and if so, which analyses you plan to perform.

12. Which of the analyses below do you plan to conduct with your own data?

	Definitely yes	Probably yes	Neutral	Probably no	Definitely no	I don't understand	I don't know	I prefer not to say
I am not interested in my own data. I want to learn how to prepare and analyze genetic data for research in general	<input type="radio"/>							
I plan to perform variant annotation of my own data, i.e. database queries to find out the effect or function of a genetic variant	<input type="radio"/>							
I want to assess my personal disease risk using my own data	<input type="radio"/>							
I want to calculate my genetic ancestry	<input type="radio"/>							
I plan to calculate genetic scores, e.g. for wellness traits like eye color or male pattern baldness, using my own data	<input type="radio"/>							
I plan to explore my pharmacogenomic markers, i.e. how my genes affect my response to drugs	<input type="radio"/>							

13. What is your opinion regarding the following reasons in favor of genome analysis in the context of this course?

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
To satisfy general curiosity	<input type="radio"/>							
To inform family members about health risks	<input type="radio"/>							
To understand what a patient may learn/experience	<input type="radio"/>							
To help understand principles of human genetics	<input type="radio"/>							

14. What is your opinion regarding the following reasons against genome analysis in the context of this course?

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
Results are not accurate (the results are error-prone)	<input type="radio"/>							
Results are not predictive (I cannot be sure a condition indicated by the results will break out)	<input type="radio"/>							
I have concerns about privacy	<input type="radio"/>							
Information will not be medically useful and will not change medical decisions	<input type="radio"/>							
I get unwanted information	<input type="radio"/>							

15. What is your opinion regarding genotyping as part of the course?

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
I feel that I would be at a disadvantage to my classmates if I did not undergo the testing	<input type="radio"/>							
I see this as an opportunity to get a service that I would not ordinarily get	<input type="radio"/>							
I am concerned that my professors or course instructors would know who took up the offer of testing and who did not	<input type="radio"/>							
I am concerned that my classmates would know who took up the offer of testing and who did not	<input type="radio"/>							
I see this as an opportunity to get information that would help me improve my health and wellbeing	<input type="radio"/>							
I am concerned that I might get some results that would be disturbing	<input type="radio"/>							
I would only take up the offer of testing if I could get genetic counseling after I got my results back	<input type="radio"/>							
I would only take up the offer of testing if I could get genetic counseling before my sample is sent in	<input type="radio"/>							
I would be concerned that people would find out genetic or health information about me	<input type="radio"/>							

Usage of Your Own Genomic Data (3 of 3)

We would like to know whether you intend to use your own genomic data, and if so, which analyses you plan to perform.

16. If it was possible in Germany, would you get yourself genotyped with array technology if you had to pay for it yourself (around €60–100)

- Definitely yes
- Probably yes
- Probably no
- Definitely no
- It depends (on)
- I don't understand
- I don't know
- I prefer not to say (because)

17. In the context of this course, we are only allowed to show you a fraction of your data. After the course, you can ask for a password to access your complete genomic data set.

Are you planning to receive and analyze your complete data beyond the course?

- I plan to further explore my genomic data beyond the course
- I want to receive my complete data, but I do not think I will look into it
- I do not want to receive my complete data
- I don't know
- I prefer not to say

18. Please explain your decision regarding the above question, on whether you would receive and analyze your complete data:

19. I feel adequately trained to analyze and interpret my personal genomic data beyond the course.

- Definitely yes
- Probably yes
- Probably no
- Definitely no
- It depends (on)
- I don't understand
- I don't know
- I prefer not to say (because)

Data Usefulness

We would like to know how useful you think genotyping based on array technology is in the field, based on your current knowledge.

20. Please express your opinion on the following statements:

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
I think the results from array genotyping are useful to physicians	<input type="radio"/>							
I think the results from array genotyping are useful to patients themselves	<input type="radio"/>							
I think the results from array genotyping lead to changes in patients' behavior	<input type="radio"/>							
I think analyzing my own genomic data as part of the AYPG course would be useful	<input type="radio"/>							
I think the results from array genotyping will lead to changes in my personal behavior	<input type="radio"/>							
I think the results from array genotyping will lead to changes in my future health care decisions	<input type="radio"/>							

Genome Analysis Regulations

This section assesses your opinion on regulations regarding genome analysis in Germany.

21. The German Genetic Diagnostics Act (Gendiagnostikgesetz, GenDG) states the following regulations:

- Since 1 February 2010, anyone applying for human genetic analyses is obliged to comply with the new GenDG. The law regulates genetic testing for medical purposes, for determining parentage, for insurance purposes, and in the workplace.
- All genetic analyses must be accompanied by a detailed explanation of the nature, significance, and scope of the test, as well as a written patient consent. For prenatal and predictive analyses, supplementary genetic counseling must be recommended.
- Doctor's reservation (Arztvorbehalt) applies, i.e.:
 - All medical doctors are allowed to order a genetic test for disease diagnosis.
 - Only specialized medical doctors with human genetic training may order a genetic test to clarify disease risk.

The text of the law can be found [here](#).

In agreement with the GenDG, we will only work with a selected set of genetic markers during this course, e.g., genetic markers used for assessing “wellness traits” or genetic ancestry.

In light of this, please share your thoughts on the following:

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
I think the GenDG is appropriate	<input type="radio"/>							
I think genetic testing should be allowed independently of disease diagnosis	<input type="radio"/>							
I think genetic testing should be allowed without genetic counseling	<input type="radio"/>							
In the context of clinical diagnostics, I would make use of genetic counseling	<input type="radio"/>							
I would like to analyze my complete data	<input type="radio"/>							
I would like to analyze only parts of my data	<input type="radio"/>							
I would only like to receive my complete data, but I do not want to analyze it	<input type="radio"/>							

22. If you would like to analyze only parts of your data, please specify which parts:

23. Do you have other thoughts on the GenDG you want to share with us?

Whole Genome Sequencing

Thus far, we have offered genotyping using array technology in the AYPG course, which can only detect specific variants. However, in this section we would like to hear your opinion on **whole genome sequencing**.

24. What is your opinion regarding whole genome sequencing (WGS)?

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
I think WGS results are more accurate than results from array data	<input type="radio"/>							
I think WGS results are more predictive than results from array data	<input type="radio"/>							
I would prefer WGS technology over array technology for genotyping my own data	<input type="radio"/>							
I think WGS results are connected with more risks than results from array data	<input type="radio"/>							
I am more concerned about privacy issues when using WGS technology, compared to using array technology	<input type="radio"/>							
I think the results from WGS are more useful to a physician than results from array data	<input type="radio"/>							
I think the results from WGS are more useful to patients themselves than results from array data	<input type="radio"/>							
I think the results from WGS would more likely lead to changes in patients' behavior than results from array data	<input type="radio"/>							
I think the results from WGS would more likely lead to changes in my personal behavior than results from array data	<input type="radio"/>							
I think the results from WGS would more likely lead to changes in my future health care decisions than results from array data	<input type="radio"/>							

25. Did you get your genome sequenced with WGS outside of this course?

- Yes
- No
- I prefer not to say (because)

26. If it was possible in Germany, would you get yourself genotyped with WGS at no charge?

- Definitely yes
- Probably yes
- Probably no
- Definitely no
- It depends (on)
- I don't understand
- I don't know
- I prefer not to say (because)

27. If it was possible in Germany, would you get yourself genotyped with WGS if you had to pay for it yourself (around €600–1000)?

- Definitely yes
- Probably yes
- Probably no
- Definitely no
- It depends (on)
- I don't understand
- I don't know
- I prefer not to say (because)

End of Course Questionnaire

A big **thank you** for helping us to improve the AYPG lecture and to learn about your attitudes towards genome analysis.

If you have any further comments, please leave them here:

Feedback

It is totally fine that you do not want to continue with the questionnaire. It would be great if you could tell us why and help us to improve.

Please explain why you did not participate. If you have any further comments, please leave them here as well:

Thank you for completing this questionnaire!

Your answers were transmitted, you may close the browser window or tab now.

Questionnaire 2: Mid-Course

Analyse Your Personal Genome (AYPG)

Dear AYPG student,

The purpose of this questionnaire is to learn about your expectations of the course and your opinion regarding analyzing your own genome and genome analysis in general. In total, we will ask you to answer three consecutive questionnaires at different time points in the course.

This is the second questionnaire.

Your answers help us improve the course concept and to understand how students feel about analyzing their own genomic data.

Your participation in this questionnaire is voluntary. You may choose not to participate. If you choose to participate, you may stop at any time without any penalty. This will not affect your participation, grade, or any other aspect of your involvement in the course, or any other aspect of your education at HPI.

The procedure involves filling out a survey that will take approximately 20 minutes. Your survey data will be identified only by a random identifier; your name and other information that could identify you will not be on the questionnaires.

Please select your choice below:

- I wish to continue with the questionnaire
- I DO NOT wish to continue and want to exit

If you have any questions, concerns, or complaints at any time about this research please contact aypgtteam@lists.myhpi.de.

The questionnaire starts now, thank you for your participation.

General Information

On this page, you will find some information about the questionnaire in general.
Please read it carefully.

Regarding the question format:

- We kindly ask you to specify your answers if text fields are displayed.
- For most questions, you can select the options *I don't understand* and *I don't know*.
 - Select *I don't understand* if you do not understand the question or answer possibility.
 - Select *I don't know* if you understand the question and the answer possibilities but you cannot decide for an answer.

Throughout the questionnaire, technical terms appear that are defined as follows:

- **Genetic variations or variants:** A term used to describe the variation in the DNA sequence in each of our genomes. There are different ways that one person's DNA sequence can differ from the reference DNA sequence. The most common type are so-called single nucleotide polymorphisms (SNPs).
- **Genotyping** is the process of determining which genetic variants an individual possesses. Genotyping can be performed through a variety of different methods, depending on the variants of interest and the resources available. For looking at many different variants at once, especially common variants, **genotyping arrays** are an efficient and accurate method. However, they require prior identification of the variants of interest.
- **Sequencing** is a method used to determine the exact sequence of a certain length of DNA. You can sequence a short piece, the whole genome, or parts of the genome, such as the exome, which are the regions of the genome that contain the instructions for RNA and proteins. Depending on the region, a given stretch of sequence may include some DNA that varies between individuals, in addition to regions that are constant. Thus, sequencing can be used to genotype someone for known variants, as well as identify variants that may be unique to that person.

Note: If not stated otherwise, we refer to array technology in questions concerning genotyping.

Before You Start

As a baseline for us to evaluate your further answers, please answer the question below.

1. Please state whether you understood the following concepts:

	Definitely yes	Probably yes	Neutral	Probably no	Definitely no	I prefer not to say
Variant	<input type="radio"/>					
Genotyping	<input type="radio"/>					
Array technology	<input type="radio"/>					
Whole genome sequencing	<input type="radio"/>					
The difference between array technology and whole genome sequencing	<input type="radio"/>					

Usage of Your Own Genomic Data (1 of 3)

We would like to know whether you intend to use your own genomic data, and if so, which analyses you plan to perform.

2. Did you get yourself genotyped as part of this course?

- Yes
- No
- I prefer not to say (because)

3. Did you discuss whether or not to get yourself genotyped as part of this course with any of the following?

- Genetic counselor
- Physician or other health professional
- Parents
- Sibling(s)
- Other family members
- Friend(s)
- Spouse/significant other
- Course instructor(s)
- Other:
- I prefer not to say (because)

4. Please reflect on the decision that you made about receiving or not receiving your genomic data as part of the course.

28. Would you go for the same choice again?

- Definitely yes
- Probably yes
- Probably no
- Definitely no
- It depends (on)
- I don't understand
- I don't know
- I prefer not to say (because)

5. Regarding your decision whether or not to get yourself genotyped, please indicate to what extend each of the statements below is true to you at the present time:

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
I feel adequately informed about the issues important to my decision	<input type="radio"/>							
The decision I made was the best decision possible for me personally	<input type="radio"/>							
I am satisfied that this was my decision to make	<input type="radio"/>							
I am satisfied with my decision	<input type="radio"/>							
I am comfortable with my decision	<input type="radio"/>							

Usage of Your Own Genomic Data (2 of 3)

We would like to know whether you intend to use your own genomic data, and if so, which analyses you plan to perform.

6. Which of the analyses below do you plan to conduct with your own data?

	Definitely yes	Probably yes	Neutral	Probably no	Definitely no	I don't understand	I don't know	I prefer not to say
I am not interested in my own data. I want to learn how to prepare and analyze genetic data for research in general	<input type="radio"/>							
I plan to perform variant annotation of my own data, i.e. database queries to find out the effect or function of a genetic variant	<input type="radio"/>							
I want to assess my personal disease risk using my own data	<input type="radio"/>							
I want to calculate my genetic ancestry	<input type="radio"/>							
I plan to calculate genetic scores, e.g. for wellness traits like eye color or male pattern baldness, using my own data	<input type="radio"/>							
I plan to explore my pharmacogenomic markers, i.e. how my genes affect my response to drugs	<input type="radio"/>							

7. What is your opinion regarding the following reasons in favor of genome analysis in the context of this course?

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
To satisfy general curiosity	<input type="radio"/>							
To inform family members about health risks	<input type="radio"/>							
To understand what a patient may learn/experience	<input type="radio"/>							
To help understand principles of human genetics	<input type="radio"/>							

8. What is your opinion regarding the following reasons against genome analysis in the context of this course?

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
Results are not accurate (the results are error-prone)	<input type="radio"/>							
Results are not predictive (I cannot be sure a condition indicated by the results will break out)	<input type="radio"/>							
I have concerns about privacy	<input type="radio"/>							
Information will not be medically useful and will not change medical decisions	<input type="radio"/>							
I get unwanted information	<input type="radio"/>							

9. What is your opinion regarding genotyping as part of the course?

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
I feel that I would be at a disadvantage to my classmates if I did not undergo the testing	<input type="radio"/>							
I see this as an opportunity to get a service that I would not ordinarily get	<input type="radio"/>							
I am concerned that my professors or course instructors would know who took up the offer of testing and who did not	<input type="radio"/>							
I am concerned that my classmates would know who took up the offer of testing and who did not	<input type="radio"/>							
I see this as an opportunity to get information that would help me improve my health and wellbeing	<input type="radio"/>							
I am concerned that I might get some results that would be disturbing	<input type="radio"/>							
I would only take up the offer of testing if I could get genetic counseling after I got my results back	<input type="radio"/>							
I would only take up the offer of testing if I could get genetic counseling before my sample is sent in	<input type="radio"/>							
I would be concerned that people would find out genetic or health information about me	<input type="radio"/>							

Usage of Your Own Genomic Data (3 of 3)

We would like to know whether you intend to use your own genomic data, and if so, which analyses you plan to perform.

29. If it was possible in Germany, would you get yourself genotyped with array technology if you had to pay for it yourself (around €60–100)?

- Definitely yes
- Probably yes
- Probably no
- Definitely no
- It depends (on)
- I don't understand
- I don't know
- I prefer not to say (because)

10. In the context of this course, we are only allowed to show you a fraction of your data. After the course, you can ask for a password to access your complete genomic data set.

Are you planning to receive and analyze your complete data beyond the course?

- I plan to further explore my genomic data beyond the course
- I want to receive my complete data, but I do not think I will look into it
- I do not want to receive my complete data
- I don't know
- I prefer not to say

11. Please explain your decision regarding the above question, on whether you would receive and analyze your complete data:

24. I feel adequately trained to analyze and interpret my personal genomic data beyond the course.

- Definitely yes
- Probably yes
- Probably no
- Definitely no
- It depends (on)
- I don't understand
- I don't know
- I prefer not to say (because)

Data Usefulness

We would like to know how useful you think genotyping based on array technology is in the field, based on your current knowledge.

14. Please express your opinion on the following statements:

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
I think the results from array genotyping are useful to physicians	<input type="radio"/>							
I think the results from array genotyping are useful to patients themselves	<input type="radio"/>							
I think the results from array genotyping lead to changes in patients' behavior	<input type="radio"/>							
I think analyzing my own genomic data as part of the AYPG course would be useful	<input type="radio"/>							
I think the results from array genotyping will lead to changes in my personal behavior	<input type="radio"/>							
I think the results from array genotyping will lead to changes in my future health care decisions	<input type="radio"/>							

Genome Analysis Regulations

This section assesses your opinion on regulations regarding genome analysis in Germany.

15. The German Genetic Diagnostics Act (Gendiagnostikgesetz, GenDG) states the following regulations:

- Since 1 February 2010, anyone applying for human genetic analyses is obliged to comply with the new GenDG. The law regulates genetic testing for medical purposes, for determining parentage, for insurance purposes, and in the workplace.
- All genetic analyses must be accompanied by a detailed explanation of the nature, significance, and scope of the test, as well as a written patient consent. For prenatal and predictive analyses, supplementary genetic counseling must be recommended.
- Doctor's reservation (Arztvorbehalt) applies, i.e.:
 - All medical doctors are allowed to order a genetic test for disease diagnosis.
 - Only specialized medical doctors with human genetic training may order a genetic test to clarify disease risk.

The text of the law can be found [here](#).

In agreement with the GenDG, we will only work with a selected set of genetic markers during this course, e.g., genetic markers used for assessing “wellness traits” or genetic ancestry.

In light of this, please share your thoughts on the following:

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
I think the GenDG is appropriate	<input type="radio"/>							
I think genetic testing should be allowed independently of disease diagnosis	<input type="radio"/>							
I think genetic testing should be allowed without genetic counseling	<input type="radio"/>							
In the context of clinical diagnostics, I would make use of genetic counseling	<input type="radio"/>							
I would like to analyze my complete data	<input type="radio"/>							
I would like to analyze only parts of my data	<input type="radio"/>							
I would only like to receive my complete data, but I do not want to analyze it	<input type="radio"/>							

16. If you would like to analyze only parts of your data, please specify which parts:

17. Do you have other thoughts on the GenDG you want to share with us?

Whole Genome Sequencing

Thus far, we have offered genotyping using array technology in the AYPG course, which can only detect specific variants. However, in this section we would like to hear your opinion on **whole genome sequencing**.

18. What is your opinion regarding whole genome sequencing (WGS)?

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
I think WGS results are more accurate than results from array data	<input type="radio"/>							
I think WGS results are more predictive than results from array data	<input type="radio"/>							
I would prefer WGS technology over array technology for genotyping my own data	<input type="radio"/>							
I think WGS results are connected with more risks than results from array data	<input type="radio"/>							
I am more concerned about privacy issues when using WGS technology, compared to using array technology	<input type="radio"/>							
I think the results from WGS are more useful to a physician than results from array data	<input type="radio"/>							
I think the results from WGS are more useful to patients themselves than results from array data	<input type="radio"/>							
I think the results from WGS would more likely lead to changes in patients' behavior than results from array data	<input type="radio"/>							
I think the results from WGS would more likely lead to changes in my personal behavior than results from array data	<input type="radio"/>							
I think the results from WGS would more likely lead to changes in my future health care decisions than results from array data	<input type="radio"/>							

19. Did you get your genome sequenced with WGS outside of this course?

- Yes
- No
- I prefer not to say (because)

30. If it was possible in Germany, would you get yourself genotyped with WGS at no charge?

- Definitely yes
- Probably yes
- Probably no
- Definitely no
- It depends (on)
- I don't understand
- I don't know
- I prefer not to say (because)

31. If it was possible in Germany, would you get yourself genotyped with WGS if you had to pay for it yourself (around €600–1000)?

- Definitely yes
- Probably yes
- Probably no
- Definitely no
- It depends (on)
- I don't understand
- I don't know
- I prefer not to say (because)

Intermediate Course Retrospective

In order to improve the Analyze Your Personal Genome course, we are extremely interested how you liked the course and the covered topics so far.

22. What worked well? Please tell us why.

23. What did not work well? Please tell us why.

End of Course Questionnaire

A big **thank you** for helping us to improve the AYPG lecture and to learn about your attitudes towards genome analysis.

If you have any further comments, please leave them here:

Feedback

It is totally fine that you do not want to continue with the questionnaire. It would be great if you could tell us why and help us to improve.

Please explain why you did not participate. If you have any further comments, please leave them here as well:

Thank you for completing this questionnaire!

Your answers were transmitted, you may close the browser window or tab now.

Questionnaire 3: End of Course

Analyse Your Personal Genome (AYPG)

Dear AYPG student,

The purpose of this questionnaire is to learn about your expectations of the course and your opinion regarding analyzing your own genome and genome analysis in general. In total, we will ask you to answer three consecutive questionnaires at different time points in the course.

This is the third questionnaire.

Your answers help us improve the course concept and to understand how students feel about analyzing their own genomic data.

Your participation in this questionnaire is voluntary. You may choose not to participate. If you choose to participate, you may stop at any time without any penalty. This will not affect your participation, grade, or any other aspect of your involvement in the course, or any other aspect of your education at HPI.

The procedure involves filling out a survey that will take approximately 20 minutes. Your survey data will be identified only by a random identifier; your name and other information that could identify you will not be on the questionnaires.

Please select your choice below:

- I wish to continue with the questionnaire
- I DO NOT wish to continue and want to exit

If you have any questions, concerns, or complaints at any time about this research please contact aypgtteam@lists.myhpi.de.

The questionnaire starts now, thank you for your participation.

General Information

On this page, you will find some information about the questionnaire in general.
Please read it carefully.

Regarding the question format:

- We kindly ask you to specify your answers if text fields are displayed.
- For most questions, you can select the options *I don't understand* and *I don't know*.
 - Select *I don't understand* if you do not understand the question or answer possibility.
 - Select *I don't know* if you understand the question and the answer possibilities but you cannot decide for an answer.

Throughout the questionnaire, technical terms appear that are defined as follows:

- **Genetic variations or variants:** A term used to describe the variation in the DNA sequence in each of our genomes. There are different ways that one person's DNA sequence can differ from the reference DNA sequence. The most common type are so-called single nucleotide polymorphisms (SNPs).
- **Genotyping** is the process of determining which genetic variants an individual possesses. Genotyping can be performed through a variety of different methods, depending on the variants of interest and the resources available. For looking at many different variants at once, especially common variants, **genotyping arrays** are an efficient and accurate method. However, they require prior identification of the variants of interest.
- **Sequencing** is a method used to determine the exact sequence of a certain length of DNA. You can sequence a short piece, the whole genome, or parts of the genome, such as the exome, which are the regions of the genome that contain the instructions for RNA and proteins. Depending on the region, a given stretch of sequence may include some DNA that varies between individuals, in addition to regions that are constant. Thus, sequencing can be used to genotype someone for known variants, as well as identify variants that may be unique to that person.

Note: If not stated otherwise, we refer to array technology in questions concerning genotyping.

Before You Start

As a baseline for us to evaluate your further answers, please answer the question below.

1. Please state whether you understood the following concepts:

	Definitely yes	Probably yes	Neutral	Probably no	Definitely no	I prefer not to say
Variant	<input type="radio"/>					
Genotyping	<input type="radio"/>					
Array technology	<input type="radio"/>					
Whole genome sequencing	<input type="radio"/>					
The difference between array technology and whole genome sequencing	<input type="radio"/>					

Usage of Your Own Genomic Data (1 of 3)

We would like to know whether you intend to use your own genomic data, and if so, which analyses you plan to perform.

2. Did you get yourself genotyped as part of this course?

- Yes
- No
- I prefer not to say (because)

3. Did you discuss whether or not to get yourself genotyped as part of this course with any of the following?

- Genetic counselor
- Physician or other health professional
- Parents
- Sibling(s)
- Other family members
- Friend(s)
- Spouse/significant other
- Course instructor(s)
- Other:
- I prefer not to say (because)

4. Please reflect on the decision that you made about receiving or not receiving your genomic data as part of the course.

Would you go for the same choice again?

- Definitely yes
- Probably yes
- Probably no
- Definitely no
- It depends (on)
- I don't understand
- I don't know
- I prefer not to say (because)

5. Regarding your decision whether or not to get yourself genotyped, please indicate to what extend each of the statements below is true to you at the present time:

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
I feel adequately informed about the issues important to my decision	<input type="radio"/>							
The decision I made was the best decision possible for me personally	<input type="radio"/>							
I am satisfied that this was my decision to make	<input type="radio"/>							
I am satisfied with my decision	<input type="radio"/>							
I am comfortable with my decision	<input type="radio"/>							

Usage of Your Own Genomic Data (2 of 3)

We would like to know whether you intend to use your own genomic data, and if so, which analyses you plan to perform.

6. Which of the analyses below did you conduct with your own data?

- Perform variant annotation of my own data, i.e. database queries to find out the effect or function of a genetic variant
- Assessing my personal disease risk using my own data
- Calculate my genetic ancestry
- Calculate genetic scores, e.g. for wellness traits like eye color or male pattern baldness, using my own data
- Explore my pharmacogenomic markers, i.e. how my genes affect my response to drugs
- Other:
- I prefer not to say (because)

7. What is your opinion regarding the following reasons in favor of genome analysis in the context of this course?

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
To satisfy general curiosity	<input type="radio"/>							
To inform family members about health risks	<input type="radio"/>							
To understand what a patient may learn/experience	<input type="radio"/>							
To help understand principles of human genetics	<input type="radio"/>							

8. What is your opinion regarding the following reasons against genome analysis in the context of this course?

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
Results are not accurate (the results are error-prone)	<input type="radio"/>							
Results are not predictive (I cannot be sure a condition indicated by the results will break out)	<input type="radio"/>							
I have concerns about privacy	<input type="radio"/>							
Information will not be medically useful and will not change medical decisions	<input type="radio"/>							
I get unwanted information	<input type="radio"/>							

9. What is your opinion regarding genotyping as part of the course?

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
I feel that I would be at a disadvantage to my classmates if I did not undergo the testing	<input type="radio"/>							
I see this as an opportunity to get a service that I would not ordinarily get	<input type="radio"/>							
I am concerned that my professors or course instructors would know who took up the offer of testing and who did not	<input type="radio"/>							
I am concerned that my classmates would know who took up the offer of testing and who did not	<input type="radio"/>							
I see this as an opportunity to get information that would help me improve my health and wellbeing	<input type="radio"/>							
I am concerned that I might get some results that would be disturbing	<input type="radio"/>							
I would only take up the offer of testing if I could get genetic counseling after I got my results back	<input type="radio"/>							
I would only take up the offer of testing if I could get genetic counseling before my sample is sent in	<input type="radio"/>							
I would be concerned that people would find out genetic or health information about me	<input type="radio"/>							

Usage of Your Own Genomic Data (3 of 3)

We would like to know whether you intend to use your own genomic data, and if so, which analyses you plan to perform.

32. If it was possible in Germany, would you get yourself genotyped with array technology if you had to pay for it yourself (around €60–100)

- Definitely yes
- Probably yes
- Probably no
- Definitely no
- It depends (on)
- I don't understand
- I don't know
- I prefer not to say (because)

10. In the context of this course, we are only allowed to show you a fraction of your data. After the course, you can ask for a password to access your complete genomic data set.

Are you planning to receive and analyze your complete data beyond the course?

- I plan to further explore my genomic data beyond the course
- I want to receive my complete data, but I do not think I will look into it
- I do not want to receive my complete data
- I don't know
- I prefer not to say

11. Please explain your decision regarding the above question, on whether you would receive and analyze your complete data:

33. I feel adequately trained to analyze and interpret my personal genomic data beyond the course.

- Definitely yes
- Probably yes
- Probably no
- Definitely no
- It depends (on)
- I don't understand
- I don't know
- I prefer not to say (because)

Data Usefulness

We would like to know how useful you think genotyping based on array technology is in the field, based on your current knowledge.

14. Please express your opinion on the statements:

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
I think the results from array genotyping are useful to physicians	<input type="radio"/>							
I think the results from array genotyping are useful to patients themselves	<input type="radio"/>							
I think the results from array genotyping lead to changes in patients' behavior	<input type="radio"/>							
I think analyzing my own genomic data as part of the AYPG course was useful	<input type="radio"/>							
I think the results from array genotyping will lead to changes in my personal behavior	<input type="radio"/>							
I think the results from array genotyping will lead to changes in my future health care decisions	<input type="radio"/>							

Genome Analysis Regulations

This section assesses your opinion on regulations regarding genome analysis in Germany.

15. The German Genetic Diagnostics Act (Gendiagnostikgesetz, GenDG) states the following regulations:

- Since 1 February 2010, anyone applying for human genetic analyses is obliged to comply with the new GenDG. The law regulates genetic testing for medical purposes, for determining parentage, for insurance purposes, and in the workplace.
- All genetic analyses must be accompanied by a detailed explanation of the nature, significance, and scope of the test, as well as a written patient consent. For prenatal and predictive analyses, supplementary genetic counseling must be recommended.
- Doctor's reservation (Arztvorbehalt) applies, i.e.:
 - All medical doctors are allowed to order a genetic test for disease diagnosis.
 - Only specialized medical doctors with human genetic training may order a genetic test to clarify disease risk.

The text of the law can be found [here](#).

In agreement with the GenDG, we will only work with a selected set of genetic markers during this course, e.g., genetic markers used for assessing “wellness traits” or genetic ancestry.

In light of this, please share your thoughts on the following:

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
I think the GenDG is appropriate	<input type="radio"/>							
I think genetic testing should be allowed independently of disease diagnosis	<input type="radio"/>							
I think genetic testing should be allowed without genetic counseling	<input type="radio"/>							
In the context of clinical diagnostics, I would make use of genetic counseling	<input type="radio"/>							
I would like to analyze my complete data	<input type="radio"/>							
I would like to analyze only parts of my data	<input type="radio"/>							
I would only like to receive my complete data, but I do not want to analyze it	<input type="radio"/>							

16. If you would like to analyze only parts of your data, please specify which parts:

17. Do you have other thoughts on the GenDG you want to share with us?

Whole Genome Sequencing

Thus far, we have offered genotyping using array technology in the AYPG course, which can only detect specific variants. However, in this section we would like to hear your opinion on **whole genome sequencing**.

18. What is your opinion regarding whole genome sequencing (WGS)?

	I strongly agree	I agree	Neutral	I disagree	I strongly disagree	I don't understand	I don't know	I prefer not to say
I think WGS results are more accurate than results from array data	<input type="radio"/>							
I think WGS results are more predictive than results from array data	<input type="radio"/>							
I would prefer WGS technology over array technology for genotyping my own data	<input type="radio"/>							
I think WGS results are connected with more risks than results from array data	<input type="radio"/>							
I am more concerned about privacy issues when using WGS technology, compared to using array technology	<input type="radio"/>							
I think the results from WGS are more useful to a physician than results from array data	<input type="radio"/>							
I think the results from WGS are more useful to patients themselves than results from array data	<input type="radio"/>							
I think the results from WGS would more likely lead to changes in patients' behavior than results from array data	<input type="radio"/>							
I think the results from WGS would more likely lead to changes in my personal behavior than results from array data	<input type="radio"/>							
I think the results from WGS would more likely lead to changes in my future health care decisions than results from array data	<input type="radio"/>							

19. Did you get your genome sequenced with WGS outside of this course?

- Yes
- No
- I prefer not to say (because)

34. If it was possible in Germany, would you get yourself genotyped with WGS at no charge?

- Definitely yes
- Probably yes
- Probably no
- Definitely no
- It depends (on)
- I don't understand
- I don't know
- I prefer not to say (because)

35. If it was possible in Germany, would you get yourself genotyped with WGS if you had to pay for it yourself (around €600–1000)?

- Definitely yes
- Probably yes
- Probably no
- Definitely no
- It depends (on)
- I don't understand
- I don't know
- I prefer not to say (because)

Course Retrospective

In order to improve the Analyze Your Personal Genome course, we are extremely interested how you liked the course and the covered topics.

22. What worked well? Please tell us why.

23. What did not work well? Please tell us why.

End of Course Questionnaire

A big **thank you** for helping us to improve the AYPG lecture and to learn about your attitudes towards genome analysis.

If you have any further comments, please leave them here:

Feedback

It is totally fine that you do not want to continue with the questionnaire. It would be great if you could tell us why and help us to improve.

Please explain why you did not participate. If you have any further comments, please leave them here as well:

Thank you for completing this questionnaire!

Your answers were transmitted, you may close the browser window or tab now.

Analyze Your Personal Genome

Retrospective Questionnaire

The purpose of this questionnaire is to compare students' attitudes regarding personal genotyping over the course. The survey is conducted in the courses *Genomische Medizin* at the Technical University of Munich and *Analyze Your Personal Genome* at Hasso Plattner Institute in Potsdam. Filling out this questionnaire will take less than 5 minutes.

Your participation in this questionnaire is anonymous to the teaching staff. Your name or other information that could identify you will not be on the questionnaires. Your responses will only be identified by a pseudonym so that we can follow the development of answers throughout questionnaires. Only the course honest broker knows the mapping of pseudonyms and names and has no access to the pseudonymized results. We will anonymize the data by deleting the mapping and additionally assigning new, random pseudonyms.

Your participation in this questionnaire is voluntary. You may choose not to participate. If you choose to participate, you may stop at any time without any penalty. This will not affect your participation, grade, or any other aspect of your involvement in the course, or any other aspect of your education at HPI.

We plan to publish the results of this survey in a scientific journal. We will only use anonymous data for the publication and we will not cite free text answers.

By continuing with the questionnaire, you confirm that you have read and understood the information above and agree to the conditions for participation.

- I want to participate in the study
- I do not want to participate in the study and want to exit

1. Did you study medicine?

- Yes
- No

2. What motivated you to participate in the course?

- General interest in genomics/genomic analyses
- To receive/analyze my own genomic data
- To gain knowledge about genomics/genomic analyses to apply it in my professional career
- To receive the credit points
- To learn about tools for variant interpretation and analysis
- Interest in ancestry analysis
- Interest in pharmacogenomics (e.g., the impact of genomic variants on medication effects)
- Interest in research topics like genome-wide association studies
- Interest in commercial genomic testing ("direct-to-consumer testing")
- To better understand the situation of patients when undergoing genomic testing
- Interest in ethical issues in the context of genomic analyses
- Interest in legal foundations of genomic analyses

3. Did you participate in personal genotyping as part of the course?

- Yes
- No

4. Has this course changed your attitude towards personal genotype analysis?

- Yes
- No

- I don't know

5. How did the course change your attitude?

- Through the course I have gained a more positive opinion on genetic analysis
- Through the course I have become more critical about genetic analysis

6. Would you have participated in personal genotyping as part of the course if it had been offered via a non-european private company, such as 23andMe?

- Yes
- No

7. Did you collect the password for your complete genotype data?

- Yes
- No

8. Do you still plan to collect the password for your complete genomic data?

- Yes
- No

9. Did you conduct analyses with your own data beyond the course?

- Analyzing genetic ancestry
- Analyzing pharmacogenomic markers (medication effects)
- Analyzing wellness traits (not disease-relevant, e.g., eye color or blood type)
- Carrier detection of risk variants for monogenetic diseases
- Analyzing risk of (common) polygenic diseases
- No, I just wanted to receive my data

10. Do you plan to conduct further analyses with your own genomic data?

- Yes
- No

11. Would you recommend personal genotyping to relatives or friends who have not taken the course?

- Yes
- No

12. Do you think that personal genotyping in the course context is useful for the learning experience?

- Yes
- No

13. How important do you consider the treatment of ethical aspects in the AYPG course?

- Absolutely necessary
- Rather important
- Neutral
- Rather unimportant
- Completely unimportant

14. Would you recommend to offer personal genotyping in future courses again?

- Yes
- No

15. Should personal genotyping be allowed without genetic counseling by a medical professional?

- Yes
- No

16. Do you feel adequately trained to analyze and interpret genomic data beyond the course?

- Yes
- No

Thank you for your time!

Your answers were transmitted, you may close the browser window or tab now.

Genomische Medizin

Retrospektiver Fragebogen

Das Ziel dieser Umfrage ist es, rückblickend die Einstellung von Teilnehmern des Kurses *Genomische Medizin* an der Technischen Universität München gegenüber Genomanalysen zu erfassen. Ähnliche Umfragen werden im derzeit stattfindenden Kurs und im Kurs *Analyze Your Personal Genome* am Hasso-Plattner-Institut in Potsdam durchgeführt. Die Beantwortung dieses Fragebogens dauert etwa 5 Minuten.

Die Teilnahme an diesem Fragebogen ist anonym. Wir speichern keine persönlichen Daten.

Die Teilnahme an diesem Fragebogen ist freiwillig. Sie können sich dafür entscheiden, nicht teilzunehmen.

Wir planen, die Ergebnisse dieser Umfrage anonymisiert zu publizieren. Wir werden für die wissenschaftliche Veröffentlichung nur aggregierte Daten verwenden, die keine Rückschlüsse auf die Teilnehmer erlauben.

Wenn Sie mit dem Fragebogen fortfahren, stimmen Sie damit den oben genannten Bedingungen zu.

- Ich möchte an der Umfrage teilnehmen
- Ich möchte nicht an der Umfrage teilnehmen und möchte die Umfrage beenden

1. Wann haben Sie an dem Kurs teilgenommen?

[Bitte auswählen] 

Optionen: SoSe 2017, WiSe 2017/18, SoSe 2018, WiSe 2018/19, WiSe 2019/20

2. Was haben Sie studiert oder welche Ausbildung hatten Sie, als Sie den Kurs belegt haben?

[Bitte auswählen] 

Optionen: Medicine, Genetic and Genomic Counseling, Other educational background

3. Was hat Sie motiviert, den Kurs zu belegen?

- Allgemeines Interesse am Thema Genetik/Genomanalysen
- Um meine eigenen genetischen Daten zu erhalten/analysieren
- Um Wissen über Genetik/Genomanalysen zu erlangen und dieses in meinem Beruf einzusetzen
- Um Werkzeuge kennenzulernen, mit denen ich genetische Daten interpretieren und analysieren kann
- Interesse an genetischen Abstammungsanalysen
- Interesse an Pharmakogenomik (z.B. der Auswirkung von genetischen Varianten auf die Medikamentenwirkung)
- Interesse an Forschungsthemen wie genomweitem Assoziationsstudien
- Interesse an kommerziellen Gentests („Direct-to-Consumer Testing“)
- Um die Situation von Patienten bei genetischen Analysen besser nachvollziehen zu können
- Interesse an den ethischen Fragestellungen im Kontext von Genomanalysen

Interesse an den rechtlichen Grundlagen von genetischen Analysen

4. Haben Sie sich im Rahmen des Kurses genotypisieren lassen?

- Ja
- Nein

5. Hat der Kurs Ihre Einstellungen gegenüber persönlichen Genotypanalysen verändert?

- Ja
- Nein

- Ich weiß nicht

6. Wie hat der Kurs Ihre Einstellung verändert?

- Durch den Kurs habe ich eine positivere Meinung zu genetischen Analysen gewonnen
- Durch den Kurs bin ich kritischer in Bezug auf genetische Analysen geworden

7. Hätten Sie sich im Rahmen des Kurses genotypisieren lassen, wenn die Genotypisierung über einen nichteuropäischen kommerziellen Anbieter wie 23andMe durchgeführt worden wäre?

- Ja
- Nein

8. Haben Sie das Passwort für Ihre vollständigen Genotypdaten angefordert?

- Ja
- Nein

9. Haben Sie außerhalb des Kurses Analysen mit ihren Daten durchgeführt?

- Ja
- Nein

10. Planen Sie noch weitere Analysen mit Ihren Daten durchzuführen?

- Ja
- Nein

11. Würden Sie Verwandten oder Freunden, die den Kurs nicht belegt haben, eine persönliche Genotypisierung empfehlen?

- Ja
- Nein

12. Denken Sie, dass die Genotypisierung im Rahmen des Kurses nützlich für die Lernerfahrung ist?

- Ja
- Nein

13. Für wie wichtig halten Sie eine Behandlung von ethischen Aspekten im Kurs Genomische Medizin?

- Absolut notwendig
- Eher wichtig
- Neutral
- Eher unwichtig
- Völlig unwichtig

14. Würden Sie für die kommenden Kurse empfehlen, weiterhin eine Genotypisierung anzubieten?

- Ja
- Nein

15. Sollte die persönliche Genotypisierung ohne ärztliche genetische Beratung erlaubt sein?

- Ja
- Nein

16. Würden Sie es für sinnvoll halten, wenn ein vergleichbarer Kurs im Medizinstudium an Universitäten verpflichtend eingeführt würde?

- Ja
- Nein

Vielen Dank für Ihre Zeit

Ihre Antworten wurden abgeschickt, Sie können das Browser-Fenster oder den Tab jetzt schließen.

Genomische Medizin

Fragebogen zu Kursbeginn

Das Ziel dieser Umfrage ist es, die Einstellung von Studierenden gegenüber Genomanalysen über den Kursverlauf zu erfassen. Die Umfrage wird in den Kursen *Genomische Medizin* an der Technischen Universität München und *Analyze Your Personal Genome* am Hasso-Plattner-Institut in Potsdam durchgeführt.

Insgesamt werden wir Sie bitten, vier Fragebögen zu beantworten: am Anfang des Kurses, während des Kurses, am Ende des Kurses und drei Monate nach dem Kurs.

Die Teilnahme an diesem Fragebogen ist freiwillig. Sie können sich dafür entscheiden, nicht teilzunehmen. Die Teilnahme an der Umfrage wird weder Ihre Note noch jeglichen anderen Aspekt Ihrer Teilnahme im Kurs oder Ihrer Ausbildung an der Technischen Universität München beeinflussen.

Die Teilnahme an diesem Fragebogen ist anonym. Wir speichern keine persönlichen Daten.

Wir planen, die Ergebnisse dieser Umfrage zu publizieren. Wir werden für die wissenschaftliche Veröffentlichung nur aggregierte Daten verwenden.

Wenn Sie mit dem Fragebogen fortfahren, stimmen Sie damit den oben genannten Bedingungen zu.

- Ich möchte an der Umfrage teilnehmen
- Ich möchte nicht an der Umfrage teilnehmen und möchte die Umfrage beenden

1. Was hat Sie motiviert, den Kurs zu belegen?

- Allgemeines Interesse am Thema Genetik/Genomanalysen
- Um meine eigenen genetischen Daten zu erhalten/analysieren
- Anrechnung des Wahlpflichtfachs
- Um Werkzeuge kennenzulernen, mit denen ich genetische Daten interpretieren und analysieren kann
- Interesse an genetischen Abstammungsanalysen
- Interesse an Pharmakogenomik (z.B. der Auswirkung von genetischen Varianten auf die Medikamentenwirkung)
- Interesse an Forschungsthemen wie genomweitem Assoziationsstudien
- Interesse an kommerziellen Gentests („Direct-to-Consumer Testing“)
- Um die Situation von Patienten bei genetischen Analysen besser nachvollziehen zu können
- Interesse an den ethischen Fragestellungen im Kontext von Genomanalysen
- Interesse an den rechtlichen Grundlagen von genetischen Analysen

2. Möchten Sie sich im Rahmen des Kurses genotypisieren lassen?

- Ja
- Nein

3. Planen Sie, nach dem Kurs das Passwort für Ihre vollständigen Genotypdaten anzufordern?

- Ja
- Nein

4. Welche Analysen planen Sie mit Ihren Daten durchzuführen?

- Keine, ich möchte einfach nur meine Daten bekommen
- Genetische Abstammungsanalysen
- Bestimmung pharmakogenomischer Varianten (Medikamentenwirkung)
- Bestimmung von nicht direkt krankheitsrelevanten genetischen Veranlagungen (z.B. Augenfarbe oder Blutgruppe)
- Diagnose von monogenetischen Krankheiten
- Trägerschaft von Risikovarianten für monogenetische Krankheiten bestimmen
- Risikoeinschätzung bei (häufigen) polygenen Krankheiten

5. Sollte die persönliche Genotypisierung ohne ärztliche genetische Beratung erlaubt sein?

- Ja
- Nein

Vielen Dank für Ihre Zeit

Ihre Antworten wurden abgeschickt, Sie können das Browser-Fenster oder den Tab jetzt schließen.

[Last Page](#)

Genomische Medizin

Fragebogen während des Kurses

Das Ziel dieser Umfrage ist es, die Einstellung von Studierenden gegenüber Genomanalysen über den Verlauf des

Wahlfaches hinweg zu erfassen. Die Umfrage wird in den Kursen *Genomische Medizin* an der Technischen Universität München und *Analyze Your Personal Genome* am Hasso-Plattner-Institut in Potsdam durchgeführt. Die Beantwortung dieses Fragebogens dauert etwa 5 Minuten.

Insgesamt besteht die Umfrage aus vier Fragebögen: am Anfang des Kurses, während des Kurses, am Ende des Kurses und drei Monate nach dem Kurs.

Die Teilnahme an diesem Fragebogen ist anonym. Wir speichern keine persönlichen Daten.

Die Teilnahme an diesem Fragebogen ist freiwillig. Sie können sich dafür entscheiden, nicht teilzunehmen. Die Teilnahme an der Umfrage wird weder Ihre Note noch Ihre Teilnahme am Wahlfach beeinflussen.

Wir planen, die Ergebnisse dieser Umfrage anonymisiert zu publizieren. Wir werden für die wissenschaftliche Veröffentlichung nur aggregierte Daten verwenden, die keine Rückschlüsse auf die Teilnehmer erlauben.

Wenn Sie mit dem Fragebogen fortfahren, stimmen Sie den oben genannten Bedingungen zu.

- Ich möchte an der Umfrage teilnehmen
- Ich möchte nicht an der Umfrage teilnehmen und möchte die Umfrage beenden

1. Haben Sie sich im Rahmen des Kurses genotypisieren lassen?

- Ja
- Nein

2. Würden Sie sich aus heutiger Sicht wieder genotypisieren lassen?

- Ja
- Nein

3. Würden Sie sich aus heutiger Sicht genotypisieren lassen?

- Ja
- Nein

Seite 04

4. Hätten Sie sich im Rahmen des Kurses genotypisieren lassen, wenn die Genotypisierung über einen nichteuropäischen kommerziellen Anbieter wie 23andMe durchgeführt worden wäre?

- Ja
- Nein

Seite 05

5. Planen Sie, nach dem Kurs das Passwort für Ihre vollständigen Genotypdaten anzufordern?

- Ja
- Nein

Seite 06

6. Welche Analysen würden Sie mit Ihren eigenen Daten durchführen?

- Genetische Abstammungsanalysen
- Bestimmung pharmakogenomischer Varianten (Medikamentenwirkung)
- Bestimmung von nicht direkt krankheitsrelevanten genetischen Veranlagungen (z.B. Augenfarbe oder Blutgruppe)
- Trägerschaft von Risikovarianten für monogene Krankheiten bestimmen
- Risikoeinschätzung bei (häufigen) polygenen Krankheiten
- Keine, ich wollte einfach nur meine Daten bekommen

Seite 07

7. Sollte die persönliche Genotypisierung ohne ärztliche genetische Beratung erlaubt sein?

- Ja
- Nein

8. Würden Sie Verwandten oder Freunden, die den Kurs nicht belegt haben, eine persönliche Genotypisierung empfehlen?

- Ja
- Nein

9. Für wie wichtig halten Sie eine Behandlung von ethischen Aspekten im Kurs Genomische Medizin?

- Absolut notwendig
- Eher wichtig
- Neutral
- Eher unwichtig
- Völlig unwichtig

10. Würden Sie es für sinnvoll halten, wenn ein vergleichbarer Kurs im Medizinstudium an Universitäten verpflichtend eingeführt würde?

- Ja
- Nein

Vielen Dank für Ihre Zeit

Ihre Antworten wurden gespeichert, Sie können das Browser-Fenster oder den Tab jetzt schließen.

Genomische Medizin

Fragebogen zu Kursende

Das Ziel dieser Umfrage ist es, die Einstellung von Studierenden gegenüber Genomanalysen über den Verlauf des

Wahlfaches hinweg zu erfassen. Die Umfrage wird in den Kursen *Genomische Medizin* an der Technischen Universität München und *Analyze Your Personal Genome* am Hasso-Plattner-Institut in Potsdam durchgeführt. Die Beantwortung dieses Fragebogens dauert etwa 5 Minuten.

Insgesamt besteht die Umfrage aus vier Fragebögen: am Anfang des Kurses, während des Kurses, am Ende des Kurses und drei Monate nach dem Kurs.

Die Teilnahme an diesem Fragebogen ist anonym. Wir speichern keine persönlichen Daten.

Die Teilnahme an diesem Fragebogen ist freiwillig. Sie können sich dafür entscheiden, nicht teilzunehmen. Die Teilnahme an der Umfrage wird weder Ihre Note noch Ihre Teilnahme am Wahlfach beeinflussen.

Wir planen, die Ergebnisse dieser Umfrage anonymisiert zu publizieren. Wir werden für die wissenschaftliche Veröffentlichung nur aggregierte Daten verwenden, die keine Rückschlüsse auf die Teilnehmer erlauben.

Wenn Sie mit dem Fragebogen fortfahren, stimmen Sie den oben genannten Bedingungen zu.

- Ich möchte an der Umfrage teilnehmen
- Ich möchte nicht an der Umfrage teilnehmen und möchte die Umfrage beenden

1. Haben Sie sich im Rahmen des Kurses genotypisieren lassen?

- Ja
- Nein

2. Würden Sie sich aus heutiger Sicht wieder genotypisieren lassen?

- Ja
- Nein

3. Würden Sie sich aus heutiger Sicht genotypisieren lassen?

- Ja
- Nein

Seite 04

4. Hat der Kurs Ihre Einstellungen gegenüber persönlichen Genotypanalysen verändert?

- Ja
- Nein

- Ich weiß nicht

Seite 05

5. Wie hat der Kurs Ihre Einstellung verändert?

- Durch den Kurs habe ich eine positivere Meinung zu genetischen Analysen gewonnen
- Durch den Kurs bin ich kritischer in Bezug auf genetische Analysen geworden

Seite 06

6. Hätten Sie sich im Rahmen des Kurses genotypisieren lassen, wenn die Genotypisierung über einen nichteuropäischen kommerziellen Anbieter wie 23andMe durchgeführt worden wäre?

- Ja
- Nein

Seite 07

7. Planen Sie, nach dem Kurs das Passwort für Ihre vollständigen Genotypdaten anzufordern?

- Ja
- Nein

8. Welche Analysen würden Sie mit Ihren eigenen Daten durchführen?

- Genetische Abstammungsanalysen
- Bestimmung pharmakogenomischer Varianten (Medikamentenwirkung)
- Bestimmung von nicht direkt krankheitsrelevanten genetischen Veranlagungen (z.B. Augenfarbe oder Blutgruppe)
- Trägerschaft von Risikovarianten für monogene Krankheiten bestimmen
- Risikoeinschätzung bei (häufigen) polygenen Krankheiten
- Keine, ich wollte einfach nur meine Daten bekommen

9. Würden Sie Verwandten oder Freunden, die den Kurs nicht belegt haben, eine persönliche Genotypisierung empfehlen?

- Ja
- Nein

10. Denken Sie, dass die Genotypisierung im Rahmen des Kurses nützlich für die Lernerfahrung ist?

- Ja
- Nein

11. Für wie wichtig halten Sie eine Behandlung von ethischen Aspekten im Kurs Genomische Medizin?

- Absolut notwendig
- Eher wichtig
- Neutral
- Eher unwichtig
- Völlig unwichtig

12. Würden Sie für die kommenden Kurse empfehlen, weiterhin eine Genotypisierung anzubieten?

- Ja
- Nein

13. Sollte die persönliche Genotypisierung ohne ärztliche genetische Beratung erlaubt sein?

- Ja
- Nein

Seite 14

14. Würden Sie es für sinnvoll halten, wenn ein vergleichbarer Kurs im Medizinstudium an Universitäten verpflichtend eingeführt würde?

- Ja
- Nein

Letzte Seite

Vielen Dank für Ihre Zeit

Ihre Antworten wurden gespeichert, Sie können das Browser-Fenster oder den Tab jetzt schließen.

Retrospektiver Fragebogen

Genomische Medizin

Das Ziel dieser Umfrage ist es, die Einstellung von Studierenden gegenüber Genomanalysen über den Kursverlauf zu erfassen. Die Umfrage wird in den Kursen *Genomische Medizin* an der Technischen Universität München und *Analyze Your Personal Genome* am Hasso-Plattner-Institut in Potsdam durchgeführt.

Insgesamt werden wir Sie bitten, vier Fragebögen zu beantworten: am Anfang des Kurses, während des Kurses, am Ende des Kurses und drei Monate nach dem Kurs.

Die Teilnahme an diesem Fragebogen ist freiwillig. Sie können sich dafür entscheiden, nicht teilzunehmen. Die Teilnahme an der Umfrage wird weder Ihre Note noch jeglichen anderen Aspekt Ihrer Teilnahme im Kurs oder Ihrer Ausbildung an der Technischen Universität München beeinflussen.

Die Teilnahme an diesem Fragebogen ist anonym. Wir speichern keine persönlichen Daten.

Wir planen, die Ergebnisse dieser Umfrage zu publizieren. Wir werden für die wissenschaftliche Veröffentlichung nur aggregierte Daten verwenden.

Wenn Sie mit dem Fragebogen fortfahren, stimmen Sie damit den oben genannten Bedingungen zu.

- Ich möchte an der Umfrage teilnehmen
- Ich möchte nicht an der Umfrage teilnehmen und möchte die Umfrage beenden

1. Haben Sie sich im Rahmen des Kurses genotypisieren lassen?

- Ja
- Nein

2. Würden Sie sich aus heutiger Sicht genotypisieren lassen?

- Ja
- Nein

3. Würden Sie sich aus heutiger Sicht wieder genotypisieren lassen?

- Ja
- Nein

4. Hat der Kurs Ihre Einstellungen gegenüber persönlichen Genotypanalysen verändert?

- Ja
- Nein

- Ich weiß nicht

5. Wie hat der Kurs Ihre Einstellung verändert?

- Durch den Kurs habe ich eine positivere Meinung zu genetischen Analysen gewonnen
- Durch den Kurs bin ich kritischer in Bezug auf genetische Analysen geworden

6. Würden Sie sich im Rahmen des Kurses genotypisieren lassen, wenn die Genotypisierung über einen nichteuropäischen kommerziellen Anbieter wie 23andMe durchgeführt werden würde?

- Ja
- Nein

7. Haben Sie das Passwort für Ihre vollständigen Genotypdaten angefordert?

- Ja
- Nein

8. Planen Sie noch, das Passwort für Ihre vollständigen Genotypdaten anzufordern?

- Ja
- Nein

9. Haben Sie außerhalb des Kurses Analysen mit Ihren Daten durchgeführt?

- Genetische Abstammungsanalysen
- Bestimmung pharmakogenomischer Varianten (Medikamentenwirkung)
- Bestimmung von nicht direkt krankheitsrelevanten genetischen Veranlagungen (z.B. Augenfarbe oder Blutgruppe)
- Trägerschaft von Risikovarianten für monogene Krankheiten bestimmen
- Risikoeinschätzung bei (häufigen) polygenen Krankheiten
- Nein, ich wollte einfach nur meine Daten bekommen

10. Planen Sie noch weitere Analysen mit Ihren Daten durchzuführen?

- Ja
- Nein

11. Sollte die persönliche Genotypisierung ohne ärztliche genetische Beratung erlaubt sein?

- Ja
- Nein

12. Würden Sie Verwandten oder Freunden, die den Kurs nicht belegt haben, eine persönliche Genotypisierung empfehlen?

- Ja
- Nein

13. Für wie wichtig halten Sie eine Behandlung von ethischen Aspekten im Kurs Genomische Medizin?

- Absolut notwendig
- Eher wichtig
- Neutral
- Eher unwichtig
- Völlig unwichtig

14. Denken Sie, dass die Genotypisierung im Rahmen des Kurses nützlich für die Lernerfahrung ist?

Ja
 Nein

Seite 15

15. Würden Sie für die kommenden Kurse empfehlen, weiterhin eine Genotypisierung anzubieten?

Ja
 Nein

Seite 16

16. Würden Sie es für sinnvoll halten, wenn ein vergleichbarer Kurs im Medizinstudium an Universitäten verpflichtend eingeführt würde?

Ja
 Nein

Seite 17

17. Fühlen Sie sich ausreichend ausgebildet, um Genotypdaten über den Kurs hinaus zu analysieren und zu interpretieren?

Ja
 Nein

Seite 18

18. Wenn Sie diesen Kurs nochmals belegen könnten, was würden Sie anders machen und warum?

Seite 19

19. Vielen Dank, dass Sie uns helfen, die Vorlesung zu verbessern und zu erfahren, wie Studierende den Thema Genomanalyse gegenüberstehen. Wenn Sie weitere Anmerkungen haben, hinterlassen Sie diese bitte hier:

Vielen Dank für Ihre Zeit

Ihre Antworten wurden gespeichert, Sie können das Browser-Fenster oder den Tab jetzt schließen.

Pre-Course Questionnaire

Understanding Your Genome

The purpose of this questionnaire is to compare students' attitudes regarding personal genotyping over the course. The survey is conducted in the courses *Genomische Medizin* at the Technical University of Munich and *Understanding Your Genome* at Hasso Plattner Institute in Potsdam. Filling out this questionnaire will take less than 5 minutes.

In total, this survey consists of four questionnaires: before the course, during the course, shortly after the course, and three months after the course.

Your participation in this questionnaire is voluntary. You may choose not to participate. If you choose to participate, you may stop at any time without any penalty. This will not affect your participation, grade, or any other aspect of your involvement in the course, or any other aspect of your education at HPI.

Your participation in this questionnaire is anonymous to the teaching staff. Your name or other information that could identify you will not be on the questionnaires. Your responses will only be identified by a pseudonym so that we can follow the development of answers throughout questionnaires. Only the course honest broker knows the mapping of pseudonyms and names and has no access to the pseudonymized results. We will anonymize the data by deleting the mapping and additionally assigning new, random pseudonyms.

We plan to publish the results of this survey in a scientific journal. We will only use anonymous data for the publication and we will not cite free text answers.

By continuing with the questionnaire, you confirm that you have read and understood the information above and agree to the conditions for participation.

- I want to participate in the study
- I do not want to participate in the study and want to exit

1. Did you study medicine?

- Yes
- No

2. What motivated you to participate in the course?

- General interest in genomics/genomic analyses
- To receive/analyze my own genomic data
- To gain knowledge about genomics/genomic analyses to apply it in my professional career
- To receive the credit points
- To learn about tools for variant interpretation and analysis
- Interest in ancestry analysis
- Interest in pharmacogenomics (e.g., the impact of genomic variants on medication effects)
- Interest in research topics like genome-wide association studies
- Interest in commercial genomic testing ("direct-to-consumer testing")
- To better understand the situation of patients when undergoing genomic testing
- Interest in ethical issues in the context of genomic analyses
- Interest in legal foundations of genomic analyses

3. Do you plan to get genotyped as part of the course?

- Yes
- No

4. Would you participate in personal genotyping as part of the course if it would be offered via a non-european private company, such as 23andMe?

- Yes
- No

5. Do you plan to request the password for your complete genomic data after the course?

- Yes
- No

6. Which analyses do you plan to conduct with your own genomic data?

- Analyzing genetic ancestry
- Analyzing pharmacogenomic markers (medication effects)
- Analyzing wellness traits (not disease-relevant, e.g., eye color or blood type)
- Carrier detection of risk variants for monogenetic diseases
- Analyzing risk of (common) polygenic diseases
- None, I just want to receive my data

7. Should personal genotyping be allowed without genetic counseling by a medical professional?

- Yes
- No

8. Would you recommend personal genotyping to relatives or friends who not took the course?

- Yes
- No

9. How important do you consider the treatment of ethical aspects in the Understanding Your Genome course?

- Absolutely necessary
- Rather important
- Neutral
- Rather unimportant
- Completely unimportant

Last Page

Thank you for your time!

Your answers were transmitted, you may close the browser window or tab now.

Intermediate Questionnaire

Understanding Your Genome

The purpose of this questionnaire is to compare students' attitudes regarding personal genotyping over the course. The survey is conducted in the courses *Genomische Medizin* at the Technical University of Munich and *Understanding Your Genome* at Hasso Plattner Institute in Potsdam. Filling out this questionnaire will take less than 5 minutes.

In total, this survey consists of four questionnaires: before the course, during the course, shortly after the course, and three months after the course.

Your participation in this questionnaire is voluntary. You may choose not to participate. If you choose to participate, you may stop at any time without any penalty. This will not affect your participation, grade, or any other aspect of your involvement in the course, or any other aspect of your education at HPI.

Your participation in this questionnaire is anonymous to the teaching staff. Your name or other information that could identify you will not be on the questionnaires. Your responses will only be identified by a pseudonym so that we can follow the development of answers throughout questionnaires. Only the course honest broker knows the mapping of pseudonyms and names and has no access to the pseudonymized results. We will anonymize the data by deleting the mapping and additionally assigning new, random pseudonyms.

We plan to publish the results of this survey in a scientific journal. We will only use anonymous data for the publication and we will not cite free text answers.

By continuing with the questionnaire, you confirm that you have read and understood the information above and agree to the conditions for participation.

- I want to participate in the study
- I do not want to participate in the study and want to exit

1. Did you study medicine?

- Yes
- No

2. Did you participate in personal genotyping as part of the course?

- Yes
- No

3. From today's perspective, would you have yourself genotyped?

- Yes
- No

4. From today's perspective, would you have yourself genotyped again?

- Yes
- No

5. Would you participate in personal genotyping as part of the course if it would be offered via a non-european private company, such as 23andMe?

- Yes
- No

6. Do you plan to request your complete genomic data after the course?

- Yes
- No

7. Which analyses do you plan to conduct with your own genomic data?

- Analyzing genetic ancestry
- Analyzing pharmacogenomic markers (medication effects)
- Analyzing wellness traits (not disease-relevant, e.g., eye color or blood type)
- Carrier detection of risk variants for monogenetic diseases
- Analyzing risk of (common) polygenic diseases
- None, I just want to receive my data

8. Should personal genotyping be allowed without genetic counseling by a medical professional?

- Yes
- No

9. Would you recommend personal genotyping to relatives or friends who did not take the course?

- Yes
- No

10. How important do you consider the treatment of ethical aspects in the Understanding Your Genome course?

- Absolutely necessary
- Rather important
- Neutral
- Rather unimportant
- Completely unimportant

Thank you for your time!

Your answers were transmitted, you may close the browser window or tab now.

End-Course Questionnaire

Understanding Your Genome

The purpose of this questionnaire is to compare students' attitudes regarding personal genotyping over the course. The survey is conducted in the courses *Genomische Medizin* at the Technical University of Munich and *Understanding Your Genome* at Hasso Plattner Institute in Potsdam. Filling out this questionnaire will take less than 5 minutes.

In total, this survey consists of four questionnaires: before the course, during the course, shortly after the course, and three months after the course.

Your participation in this questionnaire is voluntary. You may choose not to participate. If you choose to participate, you may stop at any time without any penalty. This will not affect your participation, grade, or any other aspect of your involvement in the course, or any other aspect of your education at HPI.

Your participation in this questionnaire is anonymous to the teaching staff. Your name or other information that could identify you will not be on the questionnaires. Your responses will only be identified by a pseudonym so that we can follow the development of answers throughout questionnaires. Only the course honest broker knows the mapping of pseudonyms and names and has no access to the pseudonymized results. We will anonymize the data by deleting the mapping and additionally assigning new, random pseudonyms.

We plan to publish the results of this survey in a scientific journal. We will only use anonymous data for the publication and we will not cite free text answers.

By continuing with the questionnaire, you confirm that you have read and understood the information above and agree to the conditions for participation.

- I want to participate in the study
- I do not want to participate in the study and want to exit

1. Did you study medicine?

- Yes
- No

2. Did you participate in personal genotyping as part of the course?

- Yes
- No

3. From today's perspective, would you have yourself genotyped?

- Yes
- No

4. From today's perspective, would you have yourself genotyped again?

- Yes
- No

5. Has this course changed your attitude towards personal genotype analysis?

- Yes
- No

- I don't know

6. How did the course change your attitude?

- Through the course I have gained a more positive opinion on genetic analysis
- Through the course I have become more critical about genetic analysis

7. Would you participate in personal genotyping as part of the course if it would be offered via a non-european private company, such as 23andMe?

- Yes
- No

8. Do you plan to request your complete genomic data after the course?

- Yes
- No

9. Which analyses do you plan to conduct with your own genomic data?

- Analyzing genetic ancestry
- Analyzing pharmacogenomic markers (medication effects)
- Analyzing wellness traits (not disease-relevant, e.g., eye color or blood type)
- Carrier detection of risk variants for monogenetic diseases
- Analyzing risk of (common) polygenic diseases
- None, I just want to receive my data

10. Should personal genotyping be allowed without genetic counseling by a medical professional?

- Yes
- No

11. Would you recommend personal genotyping to relatives or friends who did not take the course?

- Yes
- No

12. How important do you consider the treatment of ethical aspects in the Understanding Your Genome course?

- Absolutely necessary
- Rather important
- Neutral
- Rather unimportant
- Completely unimportant

13. Do you think that personal genotyping in the course context is useful for the learning experience?

- Yes
- No

14. Would you recommend to offer personal genotyping in future courses again?

- Yes
- No

15. Do you feel adequately trained to analyze and interpret genomic data beyond the course?

- Yes
- No

16. What worked well in the course? Please tell us why.

17. What did not work well in the course? Please tell us why.

18. A big thank you for helping us to improve the lecture and to learn about your attitudes towards genome analysis. If you have any further comments, please leave them here:

Thank you for your time!

Your answers were transmitted, you may close the browser window or tab now.

Retrospective Questionnaire

Understanding Your Genome

The purpose of this questionnaire is to compare students' attitudes regarding personal genotyping over the course. The survey is conducted in the courses *Genomische Medizin* at the Technical University of Munich and *Understanding Your Genome* at Hasso Plattner Institute in Potsdam. Filling out this questionnaire will take less than 5 minutes.

In total, this survey consists of four questionnaires: before the course, during the course, shortly after the course, and three months after the course.

Your participation in this questionnaire is voluntary. You may choose not to participate. If you choose to participate, you may stop at any time without any penalty. This will not affect your participation, grade, or any other aspect of your involvement in the course, or any other aspect of your education at HPI.

Your participation in this questionnaire is anonymous to the teaching staff. Your name or other information that could identify you will not be on the questionnaires. Your responses will only be identified by a pseudonym so that we can follow the development of answers throughout questionnaires. Only the course honest broker knows the mapping of pseudonyms and names and has no access to the pseudonymized results. We will anonymize the data by deleting the mapping and additionally assigning new, random pseudonyms.

We plan to publish the results of this survey in a scientific journal. We will only use anonymous data for the publication and we will not cite free text answers.

By continuing with the questionnaire, you confirm that you have read and understood the information above and agree to the conditions for participation.

- I want to participate in the study
- I do not want to participate in the study and want to exit

1. Did you study medicine?

- Yes
- No

2. Did you participate in personal genotyping as part of the course?

- Yes
- No

3. From today's perspective, would you have yourself genotyped?

- Yes
- No

4. From today's perspective, would you have yourself genotyped again?

- Yes
- No

5. Has this course changed your attitude towards personal genotype analysis?

- Yes
- No

- I don't know

6. How did the course change your attitude?

- Through the course I have gained a more positive opinion on genetic analysis
- Through the course I have become more critical about genetic analysis

7. Would you participate in personal genotyping as part of the course if it would be offered via a non-european private company, such as 23andMe?

- Yes
- No

8. Did you collect the password for your complete genotype data?

- Yes
- No

9. Do you still plan to collect the password for your complete genomic data?

Yes
 No

10. Did you conduct analyses with your own data beyond the course?

Analyzing genetic ancestry
 Analyzing pharmacogenomic markers (medication effects)
 Analyzing wellness traits (not disease-relevant, e.g., eye color or blood type)
 Carrier detection of risk variants for monogenetic diseases
 Analyzing risk of (common) polygenic diseases
 No, I just wanted to receive my data

11. Do you plan to conduct further analyses with your own genomic data?

Yes
 No

12. Should personal genotyping be allowed without genetic counseling by a medical professional?

Yes
 No

13. Would you recommend personal genotyping to relatives or friends who did not take the course?

Yes
 No

14. How important do you consider the treatment of ethical aspects in the Understanding Your Genome course?

- Absolutely necessary
- Rather important
- Neutral
- Rather unimportant
- Completely unimportant

15. Do you think that personal genotyping in the course context is useful for the learning experience?

- Yes
- No

16. Would you recommend to offer personal genotyping in future courses again?

- Yes
- No

17. Do you feel adequately trained to analyze and interpret genomic data beyond the course?

- Yes
- No

18. What would you do differently if you could take the course again and why?

Thank you for your time!

Your answers were transmitted, you may close the browser window or tab now.