Definitions

Constitutional (host) genes are genes common to all normal tissues in the body. Research on constitutional genes will likely involve sensitive information about research participants that IRB's should be concerned about.

Research involving pathologic human tissue (e.g. malignancies) rarely poses a risk (and no direct benefit) to participants because genetic abnormalities in this setting are usually not representative of the participant’s individual genetic makeup.

Description

The IRB realizes that information developed in the course of genetic studies may vary considerably with respect to its impact and/or value to subjects. With that in mind we offer the following guidelines for investigators, and acknowledge that there are many ways of responding to each item. The acceptability of the responses will be determined in the context of each study.

With respect to disclosure, however, the Board feels that written information in conjunction with other methods of disclosure is generally preferred. In these guidelines, the use of the word "subject" or "patient" refers to competent individuals. In the case of incompetent adults, the guidelines would apply to their proxy.

Confidentiality: Investigators must establish a method to secure information related to genetic testing in a highly secure and confidential manner, and communicate this method in a manner satisfactory to the IRB. Many genetic studies involve the long-term storage of specimens or data in tissue banks. In some of these studies, it is not clear what results the future testing on banked tissue will yield, so it is essential that participants be fully informed about their subsequent knowledge of research results. If identifiers are removed from the test results (data) or the banked specimens, it should be clear to participants that they will not be informed of future results because their data/specimens cannot be linked back to them.

Likewise, there is the consideration of future participant withdrawal. If data/specimens cannot be linked back to participants, the consent document must indicate that future withdrawal will be impossible to accomplish.

Privacy: With respect to studies which are investigations of hypotheses related to the genetic determination of a disease, identity of the participants in the study will not be disclosed, except as described in their informed consent document.

Non-Paternity: Because the discovery of non-paternity is also a special problem in genetic studies, the informed consent process should clarify this risk to subjects.

Insurability and Employability: If there is a potential risk to the patient’s insurability or employability as a result of participation in the study, the consent document should disclose this. In the United States, the Genetic Information Nondiscrimination Act of 2008 (GINA) prohibits discrimination in health coverage and employment based on genetic information. All entities that are subject to GINA must, at a minimum, comply with all applicable GINA requirements, and may also need to comply with more applicable State laws. GINA, together with the Health Insurance Portability and Accountability Act (HIPAA), generally prohibits health insurers or health plan administrators from requesting or requiring genetic information of an individual or the individual’s family members, or using it for decisions regarding coverage, rates, or preexisting conditions. The law also prohibits most employers from using genetic information for hiring, firing, or promotion decisions, and for any decisions regarding terms of employment.

Disclosure of Information: Identifiable results will not be disclosed to the subject or anyone else except in compliance with an approved protocol for contacting subjects and/or family members. Information about results may be

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released to subjects when IRB criteria for clinical application of results are met, (i.e., the claimed association between marker or gene and disease is generally accepted by the medical genetics community). Information about results may be released to the subject’s family members or others if, and only if, the subject gives written permission.

Process for Disclosure of Results: Because of the potentially sensitive and private nature of the results of genetic testing, the IRB must have a clear understanding of who will have access to study information, and under what circumstances access will be granted. Keep in mind that when participants are informed about the results of their genetic testing, complete anonymity is virtually impossible to accomplish. In addition, there are specific requirements in place regarding the certification of the lab(s) conducting the testing, and the qualifications individual(s) disclosing the results to participants.

a) CLIA Certification: Laboratories performing testing on human specimens and reporting patient-specific results must be certified under the provisions of the Clinical Laboratory Improvement Amendments of 1988 (CLIA) (57 FR 7139, Sec. 493.1). If researchers wish to provide diagnostic results to subjects or use test results to alter care, they should have laboratory tests performed under the auspices of a clinical laboratory that has been certified in accord with CLIA.

b) Individual Participant(s) and Age Considerations: Investigators and their IRBs must weigh the risks and benefits that may result from giving a participant access to their own test results. The investigator should indicate what individual (including their title and qualifications) will disclose results. Additionally, the investigator should indicate which subjects will receive results. If age is a consideration in determining who will receive results, the investigator should indicate that and indicate at what age subjects will receive their results directly. Because of the vulnerability of minor subjects, special attention should be paid to whether it is appropriate to disclose genetic information to subjects under 18 years of age. Justification for disclosure before the age of 18 might include age of onset of the condition and whether therapeutic interventions currently are available.

c) Methods: The investigator should indicate what method of disclosure (i.e., written, telephone, in person, etc.) will be used.

d) Genetic Counseling: The investigator should indicate what provisions have been made to answer questions that may arise as a result of disclosure. Regardless of whether or not genetic counselors are utilized, there should be an indication of who will respond to such questions, what hours they are available, and how long the services will be available to subjects. In addition, it should be indicated how the services will be paid for.

e) Post-Disclosure or Follow-Up: The investigator should indicate what plans there are for regular post-disclosure contact or follow-up with subjects.

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f) Costs: The investigator should indicate what costs will be borne by the patient in conjunction with disclosure.

Coercion: Genetic research may involve the study of a certain family pedigree or specific social or ethnic group. Recruitment from such a narrow pool of participants may place undue pressure on individuals to participate. Because coercion by family members is conceivable and a different or more serious problem in genetic studies than in studies of other types, study protocols should be designed to minimize this risk so that family members who are not interested in participating are not burdened to do so. Investigators are encouraged to deal with this issue directly in the informed consent process and also in their description of how they will enroll patients in their studies. Federal regulations direct that the “selection of subjects is equitable” [45 CFR 46.111(a)(3)], and that “an investigator shall seek such consent only under circumstances that provide the prospective subject sufficient opportunity to consider whether or not to participate and that minimize the possibility of coercion or undue influence” (46.116).

Additional Considerations

1. Investigators may want to consider acquiring a Certificate of Confidentiality (see IRB guidance on Certificates of Confidentiality).
2. If the results of the genetic testing yield abnormal test results, investigators should consider whether or not they plan to disclose those findings to the participant’s primary care physician for clinical use.
3. Additional considerations must be included when the study includes genetic testing and vulnerable populations (e.g. children, persons with impaired decision-making capacity or impaired mental function, etc.). What circumstances would warrant the use of a Legally-Authorized Representative (LAR) in a study involving genetic testing?
4. Protections should be considered when the time comes for the investigator to publish the results of the study. Do the investigator’s publication plans threaten the privacy or confidentiality of participants?
5. If the research involves ancillary participants (i.e. family members):
   a. Have recruitment methods been designed so that the privacy of family members is not violated? Will recruitment information be obtained through the clinical medical records of family members? If yes, should the resultant participants be consented separately, or is the permission of the primary participant sufficient?
   b. Will family members be protected against disclosure of medical or personal information about themselves to other family members?
   c. Will primary and resultant participants be given the option to not receive information about themselves? Will there be limits on such protections when family members, etc. need to be informed about health risks? In what situations would it be appropriate to overrule the participants’ decision to not receive results, and are these situations clearly delineated in the consent document?

Points to Address

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Application:
1. **Study Information**: Please state whether or not the participant will have access to the results of genetic testing.
2. **Study Information**: Please describe what provisions have been made to answer questions (PI, genetic counselor, etc.) that may arise as a result of disclosure (e.g., who will respond to such questions, what hours will they be available, long the services will be available to subjects, etc.), and how costs resulting from counseling will be covered.
3. **Study Information**: Laboratories performing testing on human specimens and reporting patient-specific results must be certified under the provisions of the Clinical Laboratory Improvement Amendments of 1988 (CLIA). Please include your assurance of your compliance with this requirement in the application.
4. **Data Monitoring Plan**: Please provide appropriate details regarding how the results of genetic testing will be stored (e.g., in locked cabinets, on password-protected computers, etc.), and state that they will be accessible only to the investigator and other authorized people.

Consent Document:
1. **Study Procedures, Disclosure of Results**: Please state whether the participant will be given the results of their genetic tests.
2. If participants WILL NOT receive the results of genetic testing:
   a. **Procedures, Disclosure**: The investigator must specify who will have access to genetic results, limiting access only to those who will need the results to appropriately conduct the research. Please state who will receive the results of the genetic tests (e.g., study team, etc.).
   b. **Confidentiality**: State that genetic results will not be made available to employers, insurance companies, etc. You may also add, “In the United States, the Genetic Information Nondiscrimination Act of 2008 (GINA) prohibits discrimination in health coverage and employment based on genetic information. GINA, together with the Health Insurance Portability and Accountability Act (HIPAA), generally prohibits health insurers or health plan administrators from requesting or requiring genetic information of an individual or the individual’s family members, or using it for decisions regarding coverage, rates, or preexisting conditions. The law also prohibits most employers from using genetic information for hiring, firing, or promotion decisions, and for any decisions regarding terms of employment. Utah State Law also offers protection against discrimination in health coverage and employment and employment.”
   c. **Confidentiality**: If genetic results will be included in the participant’s medical record, participants must be informed of this.
   d. **Confidentiality, Incidental Findings**: Please explain your plan for re-contact in cases where significant, clinically-relevant results are discovered during the course of the research. It is recommended that participants be offered the option to decide whether they would like to be re-contacted in this case.

If participants WILL receive the results of genetic testing (Note: Laboratories performing testing on human specimens and reporting patient-specific results must be certified under the provisions of the Clinical Laboratory Improvement Amendments of 1988 (CLIA) Be sure to include your assurance of your compliance with this requirement in the application.):

   e. **Formatting**: Include a sub-section in the document titled, "Genetic Testing."
   f. **Procedures, Disclosure**: The investigator must specify who will have access to genetic results, limiting access only to those who will need the results to appropriately conduct the research. Please state who will receive the results of the genetic tests.
   g. **Procedures, Method of Disclosure and Follow-Up**: State who (by title/qualifications) will disclose the results to participants, and what method will be used to disclose results (e.g., written notification, telephone, etc.). State what
provisions have been made to answer questions that may arise as a result of disclosure, and what plans there are for regular post-disclosure contact or follow-up with participants (as applicable).

h. Genetic Counseling: Please describe what provisions have been made to answer questions (PI, genetic counselor, etc.) that may arise as a result of disclosure (e.g., who will respond to such questions, what hours will they be available, long the services will be available to subjects, how genetic counseling services will be paid for, etc.).

i. Social Risks: Please disclose the possibility of social risks related to disclosure of genetic results. For example, “Studies of genetic information often carry additional risks. Social risks related to genetic testing include the possibility of employment or insurance discrimination. It includes the possibility of increased cost of your current insurance and/or the inability to obtain insurance in the future. Insurance companies may ask you about medical tests you have had if you are applying for a new policy. Insurance companies may be able to get genetic information about you if you give it to your doctor. We make every effort to protect your data, and to the best of our ability we keep all results as part of this research study out of your medical record. There is a small chance that your information would unintentionally end up in your medical record. If clinical results (procedures or genetic tests) are put into your medical record and are obtained by employers and/or insurance providers, employment or insurance discrimination may occur. If it is important for your medical care for us to reveal specific findings to your personal physician, this can be done at your request. However, please remember that you may have given insurance companies permission to access your physician’s records.”

j. GINA: It is also advisable to inform participants about what legal protections are in place related to the social risks of genetic testing. For example, “In the United States, the Genetic Information Nondiscrimination Act of 2008 (GINA) prohibits discrimination in health coverage and employment based on genetic information. GINA, together with the Health Insurance Portability and Accountability Act (HIPAA), generally prohibits health insurers or health plan administrators from requesting or requiring genetic information of an individual or the individual’s family members, or using it for decisions regarding coverage, rates, or pre-existing conditions. The law also prohibits most employers from using genetic information for hiring, firing, or promotion decisions, and for any decisions regarding terms of employment. Utah State Law also offers protection against discrimination in health coverage and employment.”

k. Non-Paternity Risks: Please address the possible risk that non-paternity may be discovered incidentally during genetic testing.

l. Confidentiality, Data Security: Please state how results of genetic testing will be stored (e.g. in locked cabinets, on password-protected computers, etc.), and state that results will be accessible only to the investigator and other authorized people.

m. Confidentiality, Incidental Findings: Please explain your plan for re-contact in cases where significant, clinically-relevant results are discovered during the course of the research. It is recommended that participants be offered the option to decide whether they would like to be re-contacted in this case.

n. Person to Contact: Please describe what provisions have been made to answer questions (PI, genetic counselor, etc.) that may arise as a result of disclosure (e.g., who will respond to such questions, what hours will they be available, long the services will be available to subjects, etc.).

o. Follow-Up Contact: Please indicate whether or not there are plans for post-disclosure contact or follow-up with participants.
Costs and Compensation: Please indicate how genetic counseling services will be paid for (if applicable).

References & Links

National Society of Genetic Counselors
http://www.nsgc.org/

DHHS Statement of Genetic Testing
http://www.hhs.gov/asl/testify/t990421c.html

Guidance on the Genetic Information Nondiscrimination Act: Implications for Investigators and Institutional Review Boards
http://www.hhs.gov/ohrp/policy/gina.html

Genetics and Ethical, Legal, and Social Issues
http://health.utah.gov/asthma/pdf_files/Genomics/asthmaELSI.pdf

Utah Genetic Testing Privacy Act
http://le.utah.gov/code/TITLE26/htm/26_45_010400.htm

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