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Comparison Table of Professional Standards

Organization	Protections for Permissible Use of Existing Materials			Protections for Future Material Collection		
	Anonymous	Identifiable		Anonymous	Identifiable	
		Coded	Directly Identified		Coded	Directly Identified
American Association of Medical Colleges (AAMC) 1997	Policy statement speaks only to future use. **Informed consent:** statement not explicit[1] **IRB review:** statement not explicit			**Informed consent:** YES General consent **IRB review:** statement not explicit	**Informed consent:** YES[2] General consent **IRB review:** statement not explicit	**Informed consent:** YES Specific **IRB review:** statement not explicit

[1] "A great deal of contemporary research is dependent on the ready accessibility of personally identifiable, i.e., linkable, archival patient materials, such as medical records and tissue specimens removed in the course of routine medical care. . . . As a rule, these kinds of studies [epidemiologic and health services research] do not require that the identity of the patient be known to the investigator. But in the great majority, the investigator must have the ability to obtain additional, or follow up information about particular sets of subjects in order to evaluate the significance of the findings and interpret them in an appropriate biological, clinical or epidemiological context. The only way such additional information can be gathered in studies of archival patient materials is if the materials are coded in such a way that they remain permanently linkable to specific patients."

[2] "Within the framework of confidentiality protection outlined in the document [Recommendations of the Secretary of Health and Human Services on the 'Confidentiality of Individually-Identifiable Health Information'], which would be overseen by the federal government under a new assurance mechanism, all research on archival patient materials, whether linkable or not, would be permitted under a mechanism of *one-time general authorization*, with notice, obtained during a patient's initial encounter with the health care system." . . . [G]ive each patient at his/her first encounter with the health care system two unique identifiers, one for clinical use, the other for research. Securely maintain the linkage between the two. (*AAMC Comments on The Recommendations of the Secretary of Health and Human Services on the " Confidentiality of Individually-Identifiable Health Information*)

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American College of Medical Genetics (ACMG) 1995	**Informed consent**: "The following factors, among others, should be considered in deciding whether it is appropriate to use previously collected samples without contacting the individual: are or will the samples be made anonymous?; the degree to which the burden of contacting individuals may make it impracticable to conduct research; existence and content of prior consent; and risks and benefits." [3] **IRB review:** Statement not explicit			**Informed consent:** YES for all above categories Consent for use of all clinical and research samples[4]. **IRB review:** Statement not explicit		

[3]"Contacts regarding new diagnostic tests should address permission to use stored samples; purpose, limitations, and possible outcomes of new tests; methods for communicating and maintaining confidentiality of results; permission to use samples or results in testing relatives; and duration of storage."

"Contacts regarding new research should address its purpose, limitations and possible outcomes, methods for communicating and maintaining confidentiality of results, duration of storage, uses of samples or results in studying others (anonymously), and sharing samples with other researchers for other types of research."

[4]"When obtaining samples for clinical test, clarify the following:
1) description of current test . . . . 2) anticipated use of samples including whether samples will be used only for the purpose for which they were collected and then be destroyed; scope of permission for future use. 3) If samples will be retained after initial use, the following issues should be clarified as well: a) The scope of permission to use samples or results in counseling and testing relatives and if so, which relatives. b) The possibility of future test refinements and subjects' expectations that their samples will be analyzed using these new tests and that the results will be communicated to them. c) Permission to use samples from which identifiers have been removed in research, including what type of research. d) Duration of storage. . . ."

"When obtaining samples for research, clarify the following:
1)Description of research. 2)Possibility research will lead to the development of new diagnostic tests. If so, whether tests will be used and whether results will be communicated to subject. 3)Permission to use samples without identifiers for other types of research. 4)Policy for future recontact if permission for future research is not obtained with the sample. 5) Duration of storage. . . ."

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American Society of Human Genetics (ASHG) 1996	**Informed consent:** "Not applicable" **IRB review:** Statement not explicit	**Informed consent:** YES[5] **IRB review:** Statement not explicit	**Informed consent:** YES **IRB review:** Statement not explicit	**Informed consent:** NO **IRB review:** Statement not explicit	**Informed consent**: YES[6] - Layered **IRB review:** Statement not explicit	**Informed consent**: YES[7] - Layered **IRB review:** Statement not explicit
Biotechnology Industry Organization (BIO) 1997	**Informed consent:** NO **IRB Review:** Statement not explicit	**Informed consent:** NO[8] **IRB Review:** Statement not explicit	**Informed consent:** YES **IRB Review:** Statement not explicit	**Informed consent:** Statement not explicit **IRB Review:** Statement not explicit		

[5] "Waivers may be granted, although the waivers will be difficult to justify by the above criteria [45 C.F.R. § 46.116] if identifiers are retained."

[6] "Subjects involved in studies where the samples are identified or identifiable should indicate if their sample should be used exclusively in the study under consideration. If the sample is to be used more generally, subjects should be given options regarding the scope of the subsequent investigations, such as whether the sample can be used only for a specific disease under investigation, or for other unrelated conditions. It is inappropriate to ask a subject to grant blanket consent for all future unspecified genetic research projects on any disease or in any area if the samples are identifiable in those subsequent studies."

[7] *See fn. 14.*

[8] "In the context of when to require informed consent, we recommend that the bill's provisions apply only to samples that are personally-identifiable, not to ones that are anonymous or encoded. We believe that it would burden the process without providing patients with additional protections if the informed consent provisions were to be required for the use of non-identifiable samples in research. As long as there is an appropriate "firewall" between the data and identifiers; the use of the data for further research should not breach confidentiality."

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College of American Pathologists (CAP) 1997	**Informed consent:** Statement not explicit **IRB review**: YES	**Informed consent:** Statement not explicit **IRB review**: YES[9]	**Informed consent:** Statement not explicit **IRB review:** YES[10]	**Informed consent:** YES General consent for research, teaching and quality control **IRB review:** YES	**Informed consent:** YES General consent for research, teaching and quality control **IRB review**: YES	**Informed consent**: YES May not identify individuals in publications without specific consent **IRB review**: YES

[9]"Each institution that controls or uses specimens of human tissue should have and enforce a written policy on confidentiality. For issues involving research, this policy should be approved by an institutional review board. Institutions should strive to maintain separation of information--that is, keeping patient identity and clinical information separate from research data through means such as coding."

[10]Where specimens or data are able to be identified as having come from a particular individual, researchers should agree to prohibitions restricting them from contacting such individual or the individual's family. In extraordinary circumstances where the researcher deems contact necessary, a request should be made through the appropriate institutional review board, which would determine the method of contact if such contact is approved."

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ELSI Working Group 1995 (Clayton, E.W. et al Informed Consent for Genetic Research on Stored Tissue Samples. *JAMA* Dec. 13, 1995:274(22); 1786-1792)	**Informed consent:** NO Informed consent may be considered if identifiers are to be removed from currently linkable samples[11] **IRB Review:** YES[12]	**Informed consent:** YES[13] **IRB review:** YES		**Informed consent:** YES[14] **IRB review:** YES		

[11]Consideration of 5 factors: whether consent is possible, whether research is scientifically sound, difficulty of recontact, whether samples are finite, availability of effective interventions.

[12]Determine whether protocol is scientifically sound, whether information could be obtained with a protocol where consent is possible.

[13]Before requiring recontact:
IRB determines if proposed research was agreed to at time of original sample collection. Implied consent sufficient.

No consent if conditions for waiver are met under 45 C.F.R § 46.116

[14]Obtain informed consent for all samples likely to be used for research in the future.
Present options of whether samples can be,
1. linked and whether they want to be recontacted with results (should inform them about benefits and risks, confidentiality and ability to withdraw from studies);
2. stripped of identifiers;
3. shared with other investigators, whether linked or anonymous or;
4. used to study certain classes of diseases.

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HHS Recommendations of the Secretary (Confidentiality of Individually-Identifiable Health Information) September 11, 1997	**Informed consent:** Statement not explicit **IRB review:** Statement not explicit	**Informed consent:** Generally requires informed consent[15] **IRB review:** YES	**Informed consent:** Generally requires informed consent[16] **IRB review:** YES	**Informed consent:** Statement not explicit **IRB review:** Statement not explicit		

[15]"We recommend that disclosures be permitted only under the following conditions: 1) The research would be impracticable to conduct without the individually-identifiable health information; 2) The research has been approved by an institutional review board organized and operated in a manner consistent with and in a accord with the institutional review board requirements of Federal Policy for Protection of Human Research Subjects; and 3) The institutional review board has determined that disclosure is allowable without the informed consent of the subjects, and, in making that judgment, has determined that a) the research project is of sufficient importance so as to outweigh the intrusion into the privacy of the patient who is the subject of the information that would result from the disclosure; b) the research is of minimal risk; c) not obtaining consent will not adversely affect the rights and welfare of the subjects; and d) the research could not be practicably carried out if consent were required. 4) We recommend that a researcher receiving information be required to remove or destroy personal identifiers, at the earliest opportunity consistent with the purposes of the research, unless an institutional review board has determined that there is a health or research justification for retention of identifiers and there is an adequate plan to protect the identities from improper use and disclosure."

[16]*See fn. " We recommend..."*

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HUGO	**Informed consent:** NO[17, 18] **IRB review:** YES	**Informed consent:** YES (Clinical)[19] NO (Research)[20] **IRB review:** YES	**Informed consent:** YES[21] **IRB review:** YES	**Informed consent:** YES[22] **IRB review:** YES	**Informed consent:** YES **IRB review:** YES	**Informed consent:** YES **IRB review:** YES

[17]"Routine samples obtained during medical care and stored, may be used for research if; there is general notification of such a policy, the patient has not objected, and the sample to be used by the researcher has been coded or anonymized. Routine samples obtained during medical care and stored before such notification of such a policy may be used for research if the sample has been anonymized prior to use. . . ."

[18]"Research samples obtained with consent and stored may be used for other research if; there is general notification of such a policy, the participant has not yet objected, and the sample to be used by the researcher has been coded or aonymized. For the use of research samples obtained before notification of a policy, these samples may be used for other research if the sample has been coded or anonymized prior to use."

[19]*See fn. "Routine samples..."*

[20]*See fn. "Research samples..."*

[21]*See fn. "Routine samples..." and "Research samples..."*

[22]"The choices offered in the consent process should reflect the potential uses of the DNA sample and its information. It is important to indicate whether the sample and its information will: identify the person, code the identity, or anonymize the identity so that the person cannot be traced although some demographic and clinical data may be provided. Even if anonymization is appropriate in certain circumstances in research, caution should be exercised in any irreversible stripping of identifiers from the samples since it may preclude valuable uses of the samples and validation of results."

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NCHGR-DOE (Guidance on Large-Scale DNA Sequencing) 1996	**Informed consent:** YES Continue to use existing libraries for large-scale sequencing, only if IRB approval and consent for continued use are obtained and approval by the funding agency is granted. IRB may determine that recontact should be made by a third party. **IRB review:** YES[23]			**Informed consent:** YES[24] [25] **IRB review**: YES	Do not construct identifiable sample collections.	

[23]"Investigators should introduce as many disconnects between the identity of donors and the publicly available information and materials as possible."

[24]Samples should be collected anonymously or anonymized.

[25] "In addition, there are several other disclosures that are of special importance for donors of DNA for large-scale sequencing. These include:
The meaning of confidentiality and privacy of information in the context of large-scale DNA sequencing, and how these issues will be addressed;
The lack of opportunity for the donor to later withdraw the libraries made from his/her DNA or his/her DNA sequence information from public use;
The absence of opportunity for information of clinical relevance to be provided to the donor or his/her family;
The possibility of unforeseen risks; and
The possible extension of risk to family members of the donor or to any group or community of interest (e.g., gender, race, ethnicity) to which a donor might belong."

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NHLBI (Report of the Special Emphasis Panel: Opportunities and Obstacles to Genetic Research in NHLBI Clinical Studies) Nov., 1997	**Informed consent**: Use of sample must not violate original consent[26] **IRB review:** Statement not explicit[27] [28]	**Informed consent:** Use of sample must not violate original consent[29] **IRB review:** YES[30]	**Informed consent:** IRB must judge adequacy of previous consent[31] **IRB review:** YES[32]	**Informed consent:** YES - Layered [33] **IRB review:** Statement not explicit		

[26]Study must be at least broadly related to the goals of the original study.

[27]"Some IRBs may also wish to approve requests for release of anonymous or anonymized specimens . . . although this Panel notes that such uses pose fewer issues and approval may be straightforward in most cases" (17)

[28]"All requests for release of specimens for which NHLBI is responsible . . . should be approved by a subcommittee of the Specimen Resource Advisory Board" (17) This board should attend to issues of informed consent for samples that are not immortalized, and they may have to prioritize requests.

[29]*See fn. 26*

[30]"When a new study needs access to identifiers, either because additional information is needed from the participants because results from the new study may suggest the necessity of recontacting participants, or because the research does not meet the definition of broadly related science, the protocol and a detailed plan for recontact must be reviewed and approved by the appropriate IRB" (15).

[31]In judging the adequacy of a previous informed consent, IRBs and funding agencies should consider,
1. The nature of the proposed study, 2. The likelihood that knowing results of the research will harm or benefit individual, 3. The availability of effective treatment or prevention for the disorder, and 4. The burden of such treatment.

[32]*See fn. 30*

[33]First level: Consent for current study (Should cover use of the specimen, recontact of subjects, storage and reuse, and if identifiers will not be needed, consent for collecting the sample anonymously - all to accomplish the goals of the study). Second level: Goals broadly related to the area of the original study (use, recontact, and storage). Third level: Goals unrelated to the area of the original study (use, recontact, and storage).

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OPRR memo to NIGMS May 21, 1997 **Guidance on Protections for Human Subjects in the National Institute of General Medical Sciences (NIGMS) Human Genetic Mutant Cell Repository**	**Informed consent:** YES[34] **IRB review:** YES[35]			**Informed consent:** YES[36] **IRB review:** YES		

[34]Regarding the submittal of materials to the repository: "A written submittal agreement for tissue collectors should require written informed consent of the donor-subjects . . . . It should also contain an acknowledgment that collectors are prohibited from providing recipient-investigators with access to the identities of donor-subjects or to information through which the identities of donor-subjects may readily be ascertained."

[35]"A written usage agreement for recipient-investigators should include the following: 'Recipient acknowledges that the conditions for use of this research material are governed by the cell repository Institutional Review Board (IRB) in accordance with Department of Health and Human Services regulations at 45 CFR 46."

[36]"Where human genetic research is anticipated, informed consent information should include information about the consequences of DNA typing (e.g., regarding possible paternity determinations)."

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Pathologists Consensus Statement Revised 1997	**Informed consent:** NO[37] **IRB review:** NO[38] (includes anonymized samples)	**Informed consent:** NO[39] **IRB review:** NO[40]	**Informed consent:** YES[41, 42] **IRB review:** Statement not explicit	**Informed consent:** YES General consent[43, 44] **IRB review:** NO	**Informed consent:** Statement not explicit[45] IRBs should be permitted to have broader latitude to waive requirement for	**Informed consent:** YES **IRB review:** Statement not explicit

[37]" . . . [T]he use of tissue collections having no existing consent forms should be grandfathered".

[38]We recommend that these regulations [45 CFR 46.101(b)(4)] be interpreted to mean that research studies using specimens that have been archived prior to their use in a research study should be exempt from IRB review.

[39] *See fn. 37*

[40]Institution that controls or uses specimens should have IRB-approved confidentiality procedures.

[41]" ... [I]t must not be possible, without the patient's specific consent and IRB approval, either for research results to become part of the medical record or for patients to become aware of the results of research performed on their specimens.

[42] *See fn. 37*

[43]"To give a description of each and every research protocol which might be performed in the (sometimes distant) future on a patient's tissue is an unreasonable burden for the patient and the researcher. . . . Provided that written nondisclosure, confidentiality, and security policies have been IRB-approved . . . we recommend that the appropriate regulatory agencies modify the current Federal regulations so that simple consent for research should be sufficient for the use of all samples that are anonymous or anonymized".

[44]"Specific informed consent must be obtained from the donor when specimens are collected specifically for research" (7).

[45]*See fn. 43*

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PRIM&R/ARENA Tissue Banking Working Group 1997	Principles apply to prospective collection with the intent that pathologists will adapt them to apply to existing collections. **Informed consent:** Statement not explicit[46] **IRB review:** Statement not explicit			**Informed consent:** YES for all above categories **IRB review:** YES for all above categories[47] [48] [49]		

[46]If organizations follow proposed guidelines for future collections, need to obtain further consent will be reduced.

[47]IRBs must decide if waiver of informed consent for each future use of banked specimens might be approved.

[48]Organizations collecting and distributing specimens must have scientific panels (which include patient participants) reviewing and prioritizing material requests.

[49]Develop a system that provides coded samples to researchers but, when necessary for research, will allow specimens to be linked, through an intermediary, to outcome data such as those available through the national cancer registry system.

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Trans-NIH Bioethics Subcommittee **(Discussions andReccomendations: Protecting the Confidentiality of Individually-Identifiable Research Information) Draft 2/24/98**	**Informed consent:** Statement not explicit **IRB review:** Statement not explicit	**Informed consent:** Generally requires informed consent[50, 51] **IRB review:** YES	**Informed consent:** Generally requires informed consent[52] **IRB review:** YES	**Informed consent:** Statement not explicit **IRB review:** Statement not explicit		

[50]"The subcommittee recommended, that access to individually-identifable research information by others, without a research participants' [sic] consent, should be prohibited, except as allowed in the following situations: (1) Access by another (secondary) researcher for a different research study needs review and approval by an IRB. Participants' informed consent, could be waived or altered, as allowed by the "Common Rule," if the IRB found that the following conditions, permitting the waiver of informed consent, were met . . . : a. the research involves no more than minimal risk to the subjects; b. the waiver or alteration will not adversely affect the rights and welfare of the subjects; c. the resarch could not practicably be carried out without the waiver or alteration; and d. whenever appropriate, the subjects will be provided with additional pertinent information after participation. . . . "

[51]"Research information should include any information, oral or recorded, that identifies an individual, or information for which there is a reasonable basis to believe could be used to identify an individual."

[52]*See fn. "The subcommittee . . ."*

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Definitions

Adapted from the ASHG Statement on Informed Consent for Genetic Research (1996) and the ELSI Working Group Statement (1995).

Anonymous biological materials were originally collected without identifiers and are impossible to link to their sources.

[Contextual definition from ELSI] **Identifiable** biological materials are [either coded or directly identified.] / [such that a subject can be identified either directly or through decoding.] / [not now or will not be made anonymous.]

Coded biological materials are unidentified for research purposes, but can be linked to their sources through the use of a code.

Directly Identified biological materials are those to which identifiers, such as a name, patient number, or clear pedigree location, are attached and made available to researchers.