Overview
Review of protocols by the Institutional Review Board (IRB) ensures that safeguards are in place to protect human subjects, and promote and preserve the trust necessary for people to be willing to participate in research. The IRB functions as an independent decision-making body charged with responsibility to oversee and protect the safety, rights, and well being of human research subjects, with a portfolio of responsibilities that includes providing oversight, continuing review, and monitoring of investigators, and identification of areas of weakness in human subjects protections. This is evidenced through the evaluation of the protocol, with a focus on both ethical and scientific or scholarly review. In order to ensure that the rights and welfare of research participants are adequately protected, the IRB is constituted to fulfill its requirements for ethical and scientific review as outlined below.

Criteria for IRB membership
Federal regulations set the minimum standard, requiring that IRBs must have at least five members, with varying backgrounds to promote complete and adequate review of research activities commonly conducted by the institution. The IRB must be sufficiently qualified through the experience and expertise of its members and the diversity of their backgrounds, including considerations of their racial and cultural heritage and their sensitivity to issues such as community attitudes, to promote respect for its advice and counsel in safeguarding the rights and welfare of human subjects. In addition to possessing the professional competence necessary to review specific research activities, the IRB must be able to ascertain the acceptability of proposed research in terms of institutional commitments and regulations, applicable law, and standards of professional conduct and practice. The IRB must therefore include persons knowledgeable in these areas. The IRB, however, may not consist entirely of members of one profession. An IRB may, in its discretion, invite individuals (consultants) with competence in special areas to assist in the review of issues which require expertise beyond or in addition to that available on the IRB. These individuals may not vote.

IRBs at Yale University are constituted to meet or exceed the regulatory standards, to allow an ethical and scientific review process that evaluates the soundness of research design and the ability of the research to answer the proposed questions. This is accomplished via a membership that is diverse in make-up, including scientists, non-scientists, community members, students, and regulatory specialists.

Criteria for IRB approval of research
In order to approve research, the IRB shall determine that all of the following requirements are satisfied:
1) The research design is sound enough to yield the expected knowledge.
2) Risks to subjects are minimized: (i) By using procedures which are consistent with sound research design and which do not unnecessarily expose subjects to risk, and (ii) whenever appropriate, by using procedures already being performed on the subjects for diagnostic or treatment purposes;
3) Risks to subjects are reasonable in relation to anticipated benefits, if any, to subjects, and the importance of the knowledge that may reasonably be expected to result;
4) Selection of subjects is equitable. In making this assessment the IRB should take into account the purposes of the research and the setting in which the research will be conducted and should be particularly cognizant of the special problems of research involving vulnerable populations, such as children, prisoners, pregnant women, mentally disabled persons, or economically or educationally disadvantaged persons;
5) Informed consent will be sought from each prospective subject or the subject's legally authorized representative, or appropriate surrogate;
6) Informed consent will be appropriately documented, or a waiver of consent, or of signed consent, may be approved in limited circumstances;
(7) When appropriate, the research plan makes **adequate provision for monitoring the data** collected to ensure the safety of subjects; and
(8) When appropriate, there are **adequate provisions to protect the privacy** of subjects and to maintain the confidentiality of data.

Further, when some or all of the subjects are likely to be vulnerable to coercion or undue influence, such as children, prisoners, pregnant women, mentally disabled persons, or economically or educationally disadvantaged persons, additional safeguards have been included in the study to protect the rights and welfare of these subjects.

### How the IRB satisfies scientific and ethical review requirements in the review of research protocols

Evaluation of each research study, including scientific review, will be relative to the complexity of the study. Outside review of the research (e.g., NIH review, Cooperative Group review, FDA review) will be acknowledged as contributing to the review, but will not be considered as the only scientific/scholarly review. It is the IRB’s responsibility to determine that risks are minimized through sound research design and reasonable in relation to anticipated benefits. The IRB will seek the expertise of consultants or ad hoc reviewers if the IRB Committee Members lack the scientific expertise to make these determinations without such consultation (see below).

Yale IRBs are constituted to include broad representation as reflected in the Committee rosters.

#### Use of pre-review committees:

In addition to review by funding agencies, a number of organizational scientific review committees provide specialty review, such as the Pediatric Protocol Review Committee, the Yale Cancer Center Protocol Review Committee, the Magnetic Resonance Research Center Review, and the Radiation Safety Committee.

IRB members and staff are guided in reviews by the use of reviewer checklists for new protocol review, continuing review, and modification review. These checklists are available to IRB members on the IRES IRB website, and are maintained in the IRES IRB Library.

#### Use of consultants

During review of a proposed research study, an IRB Chair, committee member or staff member may determine that the current membership of the IRB does not include appropriate expertise to conduct an adequate study evaluation and may invite individuals with competence in special areas to assist in the review. Consultants may be chosen from past IRB members or by contacting the department chair or division chief of the discipline involved in the special area in question.

Consultants and ad hoc reviewers will evaluate the research proposal for scientific, scholarly merit, and other issues as requested by the IRB. This includes consideration of research design, statistical power, equitable subject selection process, risk/benefit analysis, etc. The consultant or ad hoc reviewer will not be allowed to review research in which he/she has or may be perceived as having a conflict of interest. The consultant or ad hoc reviewer will provide a report to the IRB. He or she may be requested to attend the Committee meeting for questions and clarification of issues, but will not be able to vote.