Abstract
The Food and Drug Administration (FDA) and European Agency for the Evaluation of Medicinal Products (EMEA) recently issued documents encouraging sponsors to consider microdose testing before launching Phase I trials, and many commentators predict that such methodologies will be applied more routinely in drug development. However, exploratory testing has provoked several ethical criticisms. Skeptics question the value and validity of microdose trials, and whether they present a reasonable balance of risks and benefits. Another major criticism is that such studies serve mainly commercial ends. The present article explores these and other ethical concerns for studies conducted in the oncology setting. It concludes that microdosing is not inconsistent with prevailing practices in phase I research, and that in principle, such studies could strengthen the ethical basis for Phase I trials by providing them better evidentiary justification. However, several questions about informed consent are unresolved, and commercial objectives seem poised to antagonize their scientific value. The review concludes that expansion of exploratory testing should be accompanied by further research aimed at validating biomarkers, and sponsors and/or research agencies should also establish of an infrastructure for pooling and reporting microdose study results. Last, consent concerns will need to be addressed. At a minimum, this will require research into the motivations of cancer patients when they submit to research that does not involve direct benefits.