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HEART TRANSPLANTS IN SELECTED RESPONSA OF 20TH CENTURY RABBIS

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Thesis submitted in Partial Fulfillment of
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Summary

This thesis contains six chapters. It is divided into an introduction, four chapters explicating rulings and arguments of individual *poskim*, including one ruling of the Chief Rabbinate Council of Israel. The final chapter contains my analysis and conclusions.

The material that I read, analyzed and compared were responsa written in Hebrew by two prominent ultra-Orthodox rabbis of this century dealing with the permissibility of a complex issue in bio-medical ethics (heart transplantation). Additionally, I compared these to the decision of the Chief Rabbinate Council of Israel on the same topic.

My interest in this topic stems from a desire to understand how the "*halakhic*-formalist" process operates in making of Jewish Ethical Decisions in our time. My interest in bio-medical ethics began during training as a hospital chaplain, an interest I expect to pursue both professionally and intellectually within the framework of a liberal rabbinate.

I believe the contribution of this paper is the explication that regardless of the Orthodoxy of the *posek* and their belief that they adhere to a univocal Halakhah, that the factor of purposive intent renders multiple decisions to a single question entirely possible. That is, the interplay of theological, textual, and sociological factors to which a *posek* is pre-disposed, and his or her intentions substantially affect the ruling.

Acknowledgements

I want to thank Rabbi Leonard Kravitz, Phd. for his kind, patient advising in bringing this thesis to its conclusion. Our discussions, both serious and humorous, made

it all possible. You are a Rabbi and a *mensch* in the fullest sense of both. I only wish we had had earlier opportunities to work together. I can't thank you enough.

My profound thanks go to Rabbi David Ellenson, Phd. whose teaching and mentoring throughout a number of years of my rabbinic studies and much of this thesis honed my thinking and stimulated my interest and abilities in this area of inquiry, which constitutes a beginning, not a conclusion to my work. I look forward to the honor of being ordained by you as President of the College Institute.

I thank Rabbi Nancy Wiener, Dmin. for your tireless work with me on earlier versions of this thesis, clarifying ideas and wrestling over form. Thank you for the time you gave me.

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"And I shall give them a new heart, and a new spirit shall I put within them. And I shall remove the heart of stone from their flesh, and will give them a heart of flesh." (Ezekiel 11:19)

"If the Holy One, Blessed be He, carries out the transplantation I am sure that they will all succeed "[1]

INTRODUCTION

Explanation of Project

Jewish tradition holds that human life is of supreme value. Preservation of life is stressed as an overriding principle in numerous Halakhic writings. As stated by Maimonides, the 13th century philosopher, physician and legalist,[2] in his law code, the *Mishneh Torah*:

To save a life, all 613 precepts in the Torah save three: idolatry; incest; and bloodshed, may be waived, if necessary. Thus, if one is dangerously ill, and

[1] Shimon Glick, M.D., *ASSIA*, Vol. III, No.1, January, 1977, Jerusalem, p11.

2Maimonides is also considered by numerous contemporary Jewish medical ethicists (i.e. Bleich, Tendler, Rosner, Jacobovitz, among others) to be the first to explicate medical procedures and ethics based on the extant Jewish legal literature, as well as science as it was known in his time. Among his vast works are 10 volumes of medical treatises, a corpus of post-Talmudic codification and explication of Jewish law, the *Mishneh Torahh*, and over 600 *responsa*, (literally, questions and responses) many of them dealing with medical issues. His legal interpretations are cited widely in the majority of *responsa* dealing with medical ethics.

physicians assert that the patient can be cured by the use of a remedy that involves violation of a biblical commandment, the remedy should be applied. [3]

Given this precept, how is it that various late 20th century rabbis located in diverse venues have ruled differently on the question of whether or not heart transplantation, a potentially life-saving procedure, is permissible?

This paper will attempt to answer that question by exploring the Jewish ethical issues and arguments concerned with heart transplantation as it has moved from an experimental and therefore prohibited procedure to a standard and consequently generally permitted procedure for the treatment of advanced cardiac disease.

Organ transplantation in general from human to human was one of the astounding advances in medical science during the late 20th century. Heart transplantation in particular has posed some of the most complex concerns with which medical ethics had to cope. Its complexity involves close scrutiny of the *halakhic* determinations of what constitutes life and death for both the donor and recipient and how to interpret life and death in light of new technologies. As heart transplantation technologies and methods of determining death advanced, the procedure's ethical permissibility in various non-Jewish and Jewish circles changed as well. Now, in the beginning of the 21st century, scientists are already experimenting with genetic cloning of organs and the implantation of pig organs, particularly hearts, into the bodies of human beings, raising ever more complex ethical issues that will need to be faced. If *halakhah* can indeed meet the bio-ethical challenges of this new millenium, the precepts articulated in *responsa* regarding the 20th century questions of heart transplants will become ever more relevant.

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[3] Moses Maimonides, *Mishneh Torahh, Hilkhot Y'sodei HaTorah 5:6.*

By examining several 20th century *responsa* regarding heart transplants, I will demonstrate that rabbis working with the same inherited legal tradition, methodology, and medical facts, have arrived at different rulings regarding the permissibility of heart transplantation by giving preference to different sources and values within the *halakhic* tradition.[4] Further, I postulate that the preference given to one source over another, and one value over another, may create further ethical conundrums, as one life may be given preference over that of another. Most pertinent to this exploration will be an analysis of the *halakhic* and sociological arguments imbedded in the *responsa*, to reveal each rabbi's predilection to utilize and interpret the *halakhic* process in an evolving or static manner regarding a complex issue in medical ethics. In this way, the phenomenology of *halakhah* itself can be illuminated.

The Field of Jewish Bio-Medical Ethics

It is important for the reader to understand the distinction between general modern medical ethics, as practiced in hospitals or organizations such as the Hastings Institute, and the traditional methodology of Jewish medical ethics and the literature with which this paper is concerned. Modern medical ethics deals with clinical practice and medical research. The field is generally multi-disciplinary and pluralistic. It self-consciously and intentionally encompasses philosophical, sociological, legal, and medical considerations. Frequently decisions are made case by case, or nation by nation, by various levels of ethics boards and legislative bodies over a long period of time, especially where risky or religiously controversial procedures are involved.

[4] I have chosen to limit my examination to "normative" responsa, i.e. those that follow the age-old process of identifying relevant Jewish texts to shed light on a question, analyzing them in the context of the times,

In a sense, medical ethics constitute a "genus" of which Jewish medical ethics are a "species". Traditional Jewish medical ethics is a specific category of decision making which is bound by normative principles of Jewish law and philosophy, which are derived from classical texts, their analysis, and application. Moshe Zemer, in his book, *Evolving Halakhah*, points out that: "*Halakhah* is an evolving process. . . . that.... is intrinsically ethical."[5] He asserts further:

These are not external postulates, but principles inherent in halakhah itself over the ages. In general, halakhah has been an evolving process that deals with the changing reality of each generation. The elements of halakhah rest on the ethics of the Torah and the prophets, and they manifest an extraordinary sensitivity to the weak and helpless.[6]

Louis Newman echoes a similar perspective on Jewish ethics:

Constructing a contemporary Jewish ethic, as Jakobovits and many others conceive it, involves interpreting traditional Jewish texts and applying their norms to complex, often unprecedented, contemporary issues. Textual interpretation, it seems, provides the foundation for contemporary Jewish ethics.[7]

Jewish Medical Ethics is characterized and distinguished from general medical ethics in, at least, three spheres: range, underlying sources of references, and method of analysis. Normative Jewish medical ethics, as normative Jewish decision making, is bound by a specific methodology that some have labeled "*Halakhic* formalism."[8]

David Ellenson describes this method as follows:

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and determining a response.

[5] Moshe Zemer,: Evolving Halakhah A Progressive Approach to Traditional Jewish Law, (Woodstock, Vermont:Jewish Lights Publishing, 1999) p.4.

[6] Ibid.

[7] Louis E. Newman, "Woodchoppers and Respirators: The Problem of Interpretation in Contemporary Jewish Ethics," Contemporary Jewish Ethics and Morality: A Reader, eds. Elliot Dorff and Louis Newman, (New York: Oxford University Press,1995) pgs.140-160.

[8] David Ellenson, "How to Draw Guidance from a Heritage", in Between Tradition and Culture, (Atlanta, GA: Scholars Press,1994) p.82. Ellenson borrows this term from Daniel Gordis.

This classical mode of doing Jewish ethics seeks to identify precedents from the rich literature of rabbinic Judaism in order to extrapolate principles and norms that yield an authentic Jewish prescription on specific issues. . . .For over a millennium rabbis have employed *responsa,* to apply the ideas and principles derived from the sacred texts of Judaism to the problems of contemporary life.[9]

There are generally two approaches that historically have been employed by *poskim* (legal authorities) in rendering a decision. Elliott Dorff explains that:

Some rabbis have tried to establish rules and to deduce their rulings in specific cases from them, while others, the vast majority, have understood generalizations in the law as summaries of some decisions but not as determinative instructions for others. The former, deductive approach was undoubtedly influenced by the medieval penchant for systematics in both thought and law, and it produced the genre of codes; the latter, casuistic method has its roots in the Bible and the Babylonian Talmud, and it has led to the genre of *responsa.*[10]

Only *poskim*, rabbis who are deemed sufficiently learned in the sacred literature of the Jewish legal tradition, are considered authoritative legislators within their communities. Historically, the *posek's* authority has been determined by the querying rabbi and the community that follows him. Numerous sages, such as Maimonides, have been particularly notable for their knowledge, reasoning and conclusions throughout vast ranges of the Jewish world. The tradition of resolving case law in the post - Talmudic period, since 769, has used a methodology called *she'lot u'tshuvot,* literally questions and responses posed by one rabbi to an esteemed rabbi, resulting in a *responsum*, an answer having the weight of a ruling. The method of analysis establishes the problem, mines the traditional literature of Torah, Talmud, and later law codes, and relevant *responsa* to identify parallel situations and offer a conclusive response based on analogical reasoning.

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[9] .Ellenson, "How to Draw Guidance", p.82.
[10] Elliott Dorff, "A Jewish Approach to End-Stage Medical Care," Conservative Judaism, 43 (3), pg.11.

As Avraham Steinberg states, "*Halakhah* establishes its position based on fundamental principles as it attempts to resolve practical difficulties in all areas of human concern." Consequently, "ethical problems of a medical nature are solved in accordance with those principles[11] Before seeing how this has been done in regard to the issue of heart transplants, I will outline the history of the procedure itself, as this history has informed the decisions rendered on this question by individual *poskim*.

[11] Avraham Steinberg, Jewish Medical Law, (Jerusalem, Israel and California: Geffen Publishing,1980) p.16.

A Brief History of Heart Transplantation

It will be helpful for the reader to understand the history of organ transplantation in general and heart transplantation in particular in order to appreciate the scientific progress which challenged existing Jewish medical ethics. The basis for modern organ transplantation began to be established in the early part of the 20th century. A French surgeon, Alexis Carrel, developed a laboratory technique for connecting blood vessels, which was demonstrated in 1902 in the United States. In 1936, a Russian surgeon named Varoney attempted a to transplant a kidney in a person dying of kidney failure, but the patient survived only 36 hours. Other researchers attempted transplant procedures up through the 1950's, but they all failed because the patients' immune systems responded to the transplanted organs as foreign substances and rejected them.[12] During the 1950's, the concept of organ rejection was understood, but no drugs existed to prevent it. In 1954, David Hume successfully transplanted a kidney from an identical twin in Boston, overcoming the problem of rejection[13]. He completed several such operations, but eventually the kidneys failed and the patients died after a number of months. In 1959, to prevent rejection, total body radiation was tried at Keer Hospital in Paris. As long as the patients remained in total isolation, the kidney transplants remained successful. However, as soon as they were removed from isolation the patients contracted infections and died.[14] In 1962, Professor Tom Starzl in Denver, Colorado began transplanting kidneys using immunosuppressive agents, and clinical methods and the basis for what is used today were established. As noted by Durst, the discovery in 1966 of the HLA

[12] See Calvin Stiller, S.V. "Organ and Tissue Transplants," The Encyclopedia of Bioethics, Vol.4.
[13] Arye Durst, "An Overview on Organ Transplantation," *ASSIA*, III, 1997, p.7.
[14] Ibid.

(Human Leukocyte Antigen) assisted in determining organ compatibility, which decreased the odds of organ rejection.[15]

The first heart transplant was performed in 1968 by Dr. Christian Barnard in South Africa. This groundbreaking heart transplantation had limited success. As with earlier attempts at kidney transplants, the problem of rejection was not successfully overcome and life expectancy of the recipient was less than a year. Until 1978, experimental heart transplants were attempted at several centers throughout the world, using donor organs from patients removed from respirators whose hearts had stopped beating.[16] The turning point for all organ transplantation came in 1980 with the development and use of the anti-rejection drug Cyclosporin A. Life expectancy of heart transplant recipients after one year soared to 50-60%. As of 1993, survival rates after one year were about 80% and five-year survival about 70%. Today, survival rates after five years often exceed 80%. These increasing survival rates are due to the ongoing development of immunosuppressive agents and combinations of anti-rejection drug therapies. These combination therapies allow for suppression of the immune system before or during surgery to protect the patient during the time he is most vulnerable to infections and to rejection of the organ (the first day or days). Thereafter, a combination course of anti-rejection agents is tailored according to the patient's response. A patient generally must remain on these medications for the remainder of their lives.[17] The impact of these advances will be seen in the analysis of the selected responsa.

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[15] Ibid..

[16] Stiller, "Organ and Tissue Transplants." The early criterion for pronouncing death was cessation of the heart's beating. As technologies became more sophisticated, brain death and then later brain stem death were adopted as criteria. In Judaism, cessation of respiration is the Talmudic definition of death (*Yoma*85a) As it became scientifically verified that the brain stem controlled respiration, brain stem death became an acceptable criterion for the pronouncement of death in secular society.

[17] See Durst and Stiller for data. Statistical updates obtained from the National Institute of Health.

The clinical advances in heart transplantation raised ethical considerations of when a potential donor can be declared dead. The earliest experiments used donors who were respirator dependent. Once they were removed from the respirators, their hearts stopped beating, whence they were pronounced dead. The use of mechanical ventilators that could sustain a person who did not have the strength to breath on there own, or was in an irreversible coma, or a persistant vegetative state, led to the establishment of definitive criteria to establish whether a person was dead or alive. The "Harvard criteria," established by a group of doctors, theologians, lawyers, and philosophers defined the following criteria for pronouncing death: the person was in an irreversible coma due to the source of death, such as a traffic accident, or a mortal trauma that damaged the body irreparably; there were no brain stem reflexes, as determined by specific tests; and through apnea testing, the donor showed no signs of independent breathing.

Summary

The preservation of life by all measures, as we have seen, is a supreme value that underlies Jewish medical ethics. When we are dealing on the outer edges of life, however, there must be outer limits defining what measures preserve the sanctity of life, and which, ultimately, desecrate it. The remainder of this paper will analyze selected responsa dealing with the question of whether heart transplantation is permissible or not for Jews, from the time the procedure was first performed, to the time it was generally considered to be a normative procedure. While heart transplantation is the subject of the *responsa,* questions regarding the boundaries of the sanctity of life are a moral question implicit within the responsa. It is my intention to analyze and compare what is revealed in the individual arguments and to draw my own conclusions regarding the factors that

influence the decisions of whether a procedure is prohibited or permitted, and the moral consequences of such factors.

The Responsa

The responsa I will be analyzing include those of Rabbi Yehuda Eliezer Waldenberg, Rabbi Moshe Feinstein, and the decision in 1986 of the Chief Rabbinate Council under the leadership of Chief Rabbi Shlomo Goren. Rabbi Waldenberg, also known as Tzitz Eliezer, is one of the pre-eminent Israeli *poskim* of the 20th century, and generally acknowledged as the leading *halakhic* authority on issues of medical ethics. He teaches and renders decisions at *Shaare Zedek* Hospital in Jerusalem. He was a recipient of the Israel prize for his contributions. This prize is awarded for notable achievements in the arts, sciences, and other areas of Israeli intellectual life. As of 1975 he had published 13 volumes of *responsa*, which were again published in 1985. His *responsa* continue to be published in journals, such as *ASSIA*, an Israeli journal of medical ethics published in Hebrew, and *Rofeh*, an Israeli medical journal, also in Hebrew.

Rabbi Moshe Feinstein (*z"l*) was the pre-eminent American posek of his generation in the 20th century. His multiple volumes of *responsa*, known as *Iggeros Moshe*, follow the traditional divisions of the *Talmud* and law codes. His *responsa* are frequently cited and accorded significant authority in America and Israel, as will be evident in the decision of the Chief Rabbinate Council of Jerusalem's ruling regarding heart transplantations. The Chief Rabbinate has judicial control over matters of life status such as birth, ethnic designation, weddings, funerals, etc. It's far-reaching authority extends into matters that generally are considered secular in Western societies.

RESPONSUM OF RABBI ELIEZER YEHUDA WALDENBERG

The Problem with Heart Transplants in Israel[18]

In this responsum, issued shortly after the first experimental heart transplants were performed, Waldenberg is outraged at the possibility of the procedure being performed by Jews or on Jews. As presented in the historical overview above, the first experimental heart transplants, performed from 1967 through the early 70's used hearts taken from donors removed from respirators whose hearts had stopped beating. Due to organ rejection, survival rates were below what might have been expected had the recipient lived out the course of his disease. The responsum under discussion can be assumed to have been written within this time period, based on the data Waldenberg employs (that 2/3 of recipients died shortly after the procedure) and his publication of thirteen volumes of responsa in 1975, in which this responsum is contained.

Rabbi Waldenberg's responsum, "The Problem of Heart Transplantation," does not address the medical problems associated with organ rejection. While he surely would have known about them, they are not referred to explicitly in the responsum. The greatest problem he is concerned with is death of the donor and death of the recipient, and the culpability of doctors in interfering with traditional Jewish understandings of the borders of life and death.

The main issues Waldenberg addresses include: a) the impossibility of heart transplantation being permissible; b) the relationship between donors, doctors, and *halakhic* authority; c) the moral issue of social betterment; d) voluntary participation; e) the recipient; and f) who possesses the ultimate authority to heal.

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[18] *Tzitz Eliezer*, Vol. 10, Chapter 25, Section 5 (Date not indicated, but appears to be approx. 1968. Volume is self-published in 1975.)

Waldenberg begins his responsum with an emphatic assertion of his position: heart transplantation cannot be permitted. He initially raises two concerns. First is that heart transplantation cannot exist without taking out the heart of the donor while life still exists within him, specifically breath and movement of the heart. Because of this, Waldenberg raises his second point, that all the efforts of doctors to determine if the donor is dead are in vain, and are only to ease their own consciences.

> According to what is known today, it is not possible for heart transplantation to take place unless they remove the heart from the donor when he is, by all determinations, living. Thus, it is in vain that the doctors perform all their procedures to establish that he is clinically dead. They do this simply to calm their own conscience and that of the public who would be shocked to hear that the heart of someone is removed when he still has the breath of life within him.[19]

Waldenberg's reasoning is based on the traditional and strictest *halakhic* definition of death - that respiration and movement of the heart's pulsing have fully ceased in the body. According to *Yoma* 85a,[20] as long as the heart is beating and respiration can be detected, even slightly, from the nose, the person is still alive. Therefore, removing a donor's heart while it still pulses, thereby causing the cessation of respiration, is considered tantamount to murder. While this stance will be subject to dispute on the part of other decisors, Waldenberg cites the Rambam in support of his position. Maimonides writes: "Whether one kills a healthy person or a dying invalid or

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[19] *Tzitz Eliezer*, Vol. 10, Chapter 25, section 5:1 (Date not indicated, but appears to be approx. 1968. Volume is self-published in 1975.)

[20] The case discussed in *Yoma* 85a poses the questions of how far one must dig through a pile of rubble from a burning house, in order to determine whether inhabitants are alive. The *halakhah* says one must reach the nose, in order to determine whether an individual is breathing, and thus alive. Rabbi Shaul says that one must reach the heart. Rashi, in his comment on the *Gemarra* states that the heart and nose are essential indicators of respiration. The precedent for respiration being essential to the determination of life comes from *Bereshit* 7:15, "All flesh in which there is the breath of life."

even a person in his death throes [*goses*],[21] they must be put to death on his account."[22] When transplantation experiments were begun, the cessation of cardiac activity in an individual on a ventilator was considered a valid criterion for determining death in secular society. However, this was not in accord with the ***halakhah*** as respiration continued, albeit by means of a ventilator, and thus the heart continued pulsing.

However, technologies to assess brain function were soon developed and the "Harvard Criteria" establishing "brain death" were adopted as the standard for determining death in secular society, hence allowing the removal of a pulsing heart from a "brain-dead" donor. To Waldenberg, this meant nothing. As he writes above, the only way to be certain that a heart has stopped beating is to remove it, which would bring about cessation of respiration and, by his understanding, certain death of the donor. He rejects the doctor's tests of heart and/or brain function as being purely a vain effort to relieve their consciences, although in Waldenberg's opinion it does not relieve them of being deemed culpable as murderers. As death cannot be determined without resorting to the removal of the heart, harvesting the heart becomes a moral impossibility, as it constitutes murder. Consequently, even if physicians believe they are saving the life of the recipient, an act superceding almost all other commandments, this does not relieve their culpability as murderers. In Waldenberg's opinion, It is clear from *Yoma* 82b[23] that murder is forbidden, even for the sake of saving a life.

In former times, when the ***bet din*** was active, Waldenberg notes, the murderer of a living person; i.e. a living individual who still has breath and heart beat, even a *goses*,

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[21] A *goses* is a person in the final death throes, where death rattles may be heard in the throat. A *goses* is considered to have less than three days of life remaining.

[22] *Mishneh Torah, Hilkhot Rotzeakh*, 5:8. Transl. Hyman Klein, Part 2, 5:7, "Book of Torts" The Code of Maimonides. (New Haven, Yale University Press, 1954).

was sentenced to death by the *bet din*. In other words, the *halakhah* holds that an authoritative human court holds a murderer culpable. Waldenberg emphasizes that the doctors who perform heart transplants are thought of as murderers and while this cannot be done in our day, such doctors should be brought to justice before human courts if Jewish law in this area were legally actionable.

Having established that it is impermissible to harvest a heart from a living donor, Waldenberg further asserts his moral position against transplantation by advancing arguments on who might be thought of as a legitimate donor. An *halakhic* category of near-death exists which is most analogous to the condition of donors whose organs were transplanted from 1968 through the early 70's, according to cardiac or early "brain death"[24] criteria. This is the category of *treifa*. Waldenberg raises the idea of a *treifa* as a potential donor as a solution to the problem, yet he rejects it. A *treifa* is one whose life is not considered "viable" (similar to an animal deemed unfit, or *treif*.) Persons in this category include individuals sentenced to death, as well as individuals mortally wounded in a traffic accident or by a severe blow. By definition, the *treifa* will not live beyond a year, and no medical treatment will save him.[25]

If the life of such a patient is not considered viable, Waldenberg asserts,

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[23] To save a life, all commandments of the Torah may be superceded, save murder, incest, and idolatry. Pikuakh Nefesh does not allow for murder. See appendix.

[24] This criteria was later refined as the workings of the brain were better understood.

[25] It is interesting to note that Orthodox Rabbi Daniel Sinclair and Conservative Rabbi Elliot Dorff have suggested that *treifa* rather than *goses* might best serve as the operative category for discussion of humane treatment for end-stage medical care. Judaism requires that life be sustained by all available measures. However, contemporary machines such as respirators and extreme medical treatments may cause great physical suffering to the patient who otherwise would have become *goses* and died. Sinclair and Dorff have sought possible Jewish responses to the question of whether to initiate certain treatments and when or whether it is permissible to remove heroic measures. An end-stage patient whose death is artificially prolonged on a respirator might be considered in a position most analagous to a *treifa* and, in their opinion, this might justify removal from the respirator. See Elliot Dorff, "A Jewish Approach to End-Stage Medical Care", Conservative Judaism, 43 (3), p.19. Also see Daniel Sinclair, Tradition and the Biological

. . . the doctors might say that they can thus strike the *treifa* because nothing will benefit him, and he will die anyhow, by another means, so it could be judged that it is permitted to remove his heart and plant it into another, saving him [recipient] and giving the sick person health.[26]

However, Waldenberg notes, the Rambam rules:

The one who kills him [*the treifa*], even though the *treifa* eats and drinks and walks about in the market-place, the murderer is not culpable *b'dei adam*. [i.e. by the court of humans] but is culpable *b'dei shamayim* [i.e., God, the divine judge].[27]

In other words, there is no *heter* for any individual to take the life or death of another into his own hands, even if the other would die anyway, and even if punishment resides with the realm and will of the divine. Indeed, for a pious, Orthodox individual, culpability in the divine realm might be even more significant. Waldenberg emphasizes his stringent opposition to those doctors who would take matters into their own hands and perform the procedure anyway, citing the Rambam:

All who cause death but who are not punishable by a human court, if God wants to put them to death for the sake of *tikkun olam*, the betterment of society, it is within God's authority to do so. Thus, a human court, because the times require it, may also sentence them to death.[28]

Waldenberg asserts that our times -- precisely because medical science has made heretofore untold innovations possible -- demand careful vigilance and supervision lest it be thought that one can cavalierly take the life of another in this way. On the other hand, his argument implies that medical science is not to be and is entering a "slippery slope" in this area, one that will lead it on a downward moral spiral. "And how can we, in our

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Revolution: The Application of Jewish Law to the Treatment of the Critically Ill. (Edinburgh: Edinburgh University Press, 1989).

[26] Tzitz Eliezer, 25:5:2.

[27] *Hilkhot Rotzeah*, 5:8.

[28] *Hilkhot Rotzeah*, 5:4.

time, kill a soul from Israel by taking his organs and planting them in another soul? This serves as a strict warning that one does not destroy a soul for the sake of another."[29]

Waldenberg then raises the issue as to whether the fact that a potential donor volunteers to have his or her organs transplanted upon death effects the prohibition. Here too Waldenberg brings various *halakhic* precedents to teach us that this is forbidden, even in the case of an individual who is already doomed to certain death. For example, he cites a case in Sanhedrin 80b in which idolators demand that one Israelite be handed over to them for sacrifice, or all will die. The Gemarra discusses whether a treifa who is doomed to die in any case, can willingly hand himself over under these circumstances. The Meiri concludes that if it is permitted to sacrifice a treifa, whether of the treifa's own will or not for the sake of saving the rest of the group, then healthy people could also be sacrificed. Even if it were permitted, Waldenberg asserts that this would not apply in the subject at hand. He writes that even if a *goses* or *treifa* is *halakhically* permitted to hand himself over for the sake of saving others, he is not permitted to volunteer as a heart donor because of doubts as to whether an individual can genuinely volunteer under such circumstances:

> Even if the *treifa* or *goses* agrees to hand himself over for such a procedure, there is great doubt whether one can permit him to do so based on his status of *chayei-sha'ah*[30]. It is doubtful whether he can genuinely volunteer for this of his own will, as his decision may only reflect his despair about being close to death.[31]

Waldenberg presents us with a further, critical argument against the permissibility of a *treifa* or a *goses* being handed over, or handing himself over, i.e. volunteering as a heart donor. He refers to the Rambam's comments regarding the case mentioned above in

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[29] Tzitz Eliezer, 25:5:3.
[30] Temporary life.
[31] Tzitz Eliezer, 25:5:4.

Sanhedrin, "man does not have possession over his life. Rather it belongs to *HaKadosh Baruch Hu*."[32]

Up to this point in the responsum, Waldenberg has addressed the issue of "killing" the potential heart donor. However, he now turns to the potential recipient and continues to voice his opposition to the procedure even when focusing on the one who will potentially benefit from the operation. Here it is vital to note that at the time this responsum was written, the procedure was only performed on very sick individuals who generally were in considerable pain and were likely to die soon without the transplant.[33] Attempts at increasing the life span of recipients by transplant, in more that two-thirds of the early cases, actually resulted in death within a very short time. Added to this is the fact that the procedure itself first requires removing the recipient's natural heart, while it is still beating, thereby technically killing him from a *halakhic* standpoint. Further, the recipient might have lived longer without the procedure, so even if he is returned to life with another person's heart, Waldenberg contends the operation cannot be considered as *pikuakh nefesh*. The reality of medicine's capability informs Waldenberg's ruling. He asserts that:

> Knowing the odds of whether the recipient is more likely to live or die is not possible... It is definitely forbidden to perform a procedure such as this, as taking out the recipient's heart would definitely kill him, and there is only a small chance that returning a strange heart to his body would restore life. [34]

He is concerned with the declining moral spiral that allowing such a procedure might precipitate. Throughout the responsum he expresses concern that the times

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[32] Rambam, 5:6, Sanhedrin 80.

[33] Here we begin to see where Waldenberg and Feinstein will come to differ. As medical technology progesses, success rates increase, and technology develops that could determine the moment of death neurologically, the two poskim interpret these developments in light of *halakhah* in differing manners.

demand a stringent stance against an act that he considers murder. Indeed, Waldenberg fears that if such procedures are not absolutely condemned as completely immoral and in opposition to Jewish law and values, then such "murders" will only increase. Doctors should not be allowed to engage in any acts that can be viewed so as to diminish the respect for life that society ought to hold. He fears the "horrors" this technology might lead to. The "horrors" he contemplates include hastening the death of a donor for the sake of using their organs, advancing the egos of doctors, or permitting suicide, for example. The concerns Waldenberg voices here will find even greater expression in a later responsum he will write, one that I will discuss later in the thesis.

Waldenberg comments that in previous responsa, he has permitted performing a dangerous surgery under certain circumstances in which an individual is in great danger and it is uncertain whether the individual's life will be shortened or lengthened by the operation. However, he asserts that the premise on which that is based differs from that of heart transplantation. He explains further, referring to the Ramban in Torat haAdam:

> When the Torah gave doctors permission to heal, there was no suspicion that there would be anything in their minds other than healing as a *mitzvah* of mercy and of saving lives.

At the time this responsum was written, Waldenberg as we have seen is deeply concerned that heart transplantation constitutes "double murder." What is supposed to heal one person does not do so -- and it kills another. Generally, the permissibility of a dangerous surgery rests on the probable outcome:

> In the final analysis, when the chances of the sick person living are greater than his dying, a dangerous surgery may be permitted, but when the chances of his dying are greater than his living, such surgery is forbidden.[35]

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[34] Tzitz Eliezer, 25:5:5.
[35] Tzitz Eliezer, 25:5:5.

In the instance of heart transplant surgery, the chances of the cardiac patient surviving a transplant were far less than that of survival. Consequently, the procedure is forbidden.

On the surface this would seem to imply that the inability to predict the odds of the recipient's survival is the only objection. However, we have seen much more in Waldenberg's vehement responsum on "The Problems with Heart Transplantation in Israel." The essential problem that recurs in his arguments is that removing a heart while it still beats is murder, whether it is from a *treifa* or *goses* (i.e. one who is *chayei sha'ah*) or whether it is from the recipient into whom a new heart will be placed. Waldenberg further finds fault with the doctors whose hubris leads them to convince themselves that a donor is dead, based on contemporary scientific data. He adamantly does not accept their criteria. While the Torah gives doctors the authority to heal, Waldenberg asserts that such a procedure as this could not possibly fall under that *r'shut*, as it violates the strict prohibition against murder. And thus, any doctor, however God-fearing, knows that it is absolutely necessary to prevent the performance of this surgery in Israel or on a Jew. And the healer of all flesh will send complete healing to all the sick of his people of Israel."[36]

To permit such a procedure in our time would lead to a downward moral spiral. Waldenberg therefore concludes: "And the healer of all flesh will send complete healing to all the sick of his people if Israel."[37]

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[36] Tzitz Eliezer, 25:5:5.
[37] Tzitz Eliezer, 25:5:5.

Ultimately, Waldenberg leaves the cardiac patient, for all the reasons cited above, in the hands of God.

RABBI MOSHE FEINSTEIN

This section will closely examine one of the oft-cited responsa from *Iggeros Moshe* regarding heart transplantation, as well as several other influential decisions he issued related to this topic. The brevity and directness of some of Feinstein's rulings, as presented here, should not mislead the reader regarding the depth of investigation and thought that has led to his rulings. It has been said of Moshe Feinstein that "he made *psak* look easy. A telephone response to questions involving life and death. . . . It goes without saying Reb Moshe spoke to cardiologists and radiologists, and discussed the medical realities with them. And then, after an exhaustive study of *Shas and poskim,* he drew his conclusions."[38]

Iggeros Moshe, II:174[39]

This responsum, written around the same time as Waldenberg's, is a direct response to a query by Rabbi Yaakov Yitzhak Weiss, 19 Tammuz 5728 regarding heart transplantation. At the time, Weiss was Chief Rabbi in Manchester, England, and was soon to assume the role of *Av HaBet Din Tzedek*, head of the Chief Rabbinate Council in Jerusalem. Early experimental heart transplants were occurring in Western countries. As we have already seen, an ad hoc Committee at Harvard, in 1968, established rough criteria for the circumstances under which transplantation could occur and these standards were adopted by most Western countries as the criteria for determining that a potential donor was dead. The existence of the procedure raised uneasiness among

[38] Moshe Tendler, "A Matter of Life and Death" The Jewish Observer, October, 1991, p.12.
[39] 19 Tammuz 5728 (July 1968).

halakhists about whether Jewish legal categories for the determination of life and death and the doctors' mandate to heal were consistent with the performance of the procedure among "*klal Yisrael.*"[40]

While the main question Weiss raised is whether heart transplantation is permissible for a sick Jewish patient, he also queries Feinstein on several corollary *halakhic* questions as well. These questions -- such as what is the *halakhic* status of a decapitated man?-- may seem peculiar in regard to modern medicine. However, while Feinstein refrains from in-depth engagement on the matter of heart transplantation itself, it is within the discourse on the corollary matters that Feinsteins' reasoning on the main question of heart transplantation and *pikuakh nefesh* are revealed. The subjects which will be discussed herein concern: a) a case in Mishneh Ohalot 1:6 regarding a person who has been decapitated; b) a ruling in Shulhan Aruch, Orach Haim 30:5, that the posthumous cesarean section of a woman who dies in labor is forbidden even if it might save the fetus and; c) why Feinstein permits certain organ donations.

Feinstein, echoing Waldenberg, begins with a succinct preamble in which he states his definitive position regarding heart transplants:

> I don't want to enter into lengthy discussion or analysis and dispute over the matter of transplanting the heart of one person into another. . . The matter is clear, and any attempt to argue will only serve to weaken the *halakhic* ruling. . . . The doctors who have begun to perform heart transplants are committing the murder of two people with their own hands.[41]

He continues:

> The doctors who have recently begun to transplant hearts are committing murder of two people. They murder with their own hands, those from whom they take a

[40] The responsa of Waldenberg and Feinstein, and the Decision of the Rabbinate Council direct themselves to Jews.

[41] Iggeros Moshe, Yoreh De'ah, II:174, July 15, 1968.

heart while the person still lives, not only according to Jewish law, but also according to the doctors who admit that he still lives and will die from the procedure. They are still murderers even though they contend that the donor is *chayei-sha-ah* or even *chayei-yamim*.[42]

Feinstein's statements about secular medicine are certainly accurate. That is, the donor's respiratory and circulatory signs of life remain, although assisted by machines, and they will cease with the removal of the heart. His objections to the procedure are based on the cessation of life that it will cause in the donor, and the effect it would have at that time on the recipient. From the standpoint of the *halakhah*, he contends that heart transplantation is intentional double murder.

Feinstein explains that the doctors who remove the heart of the donor are killing him according to *dinei haTorah* (Jewish law). He asserts that the doctors admit that the donor is alive prior to removal of the heart and have no doubt that he will die from the procedure. They justify themselves on the basis of the donor being *chayei sha'ah* or even *chayei yamim*. As for the recipient, Feinstein asserts that the doctors know he might have lived hours or years with his cardiac disease. Instead, with the experimental heart transplant procedure, most recipients die within hours. Noting a famous case, he comments that: "Even with the one whose [heart was transplanted] in Africa whose life was extended for six months, it was already agreed, according to what I've heard, that it couldn't be possible for him to live.[43] It is apparent from his reference to Christian Barnard's transplant in Africa, and the expectations of the recipient's longevity, that he was in close touch with the specific activities of medical scientists.

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[42] Ibid.
[43] Ibid.

Because of the failure of heart transplantation to extend meaningful life, and what medical scientists knew about the state of the donors, Feinstein's ruling is based on Jewish law irrefutably holding the doctors who perform heart transplants culpable as murderers. Whether the donor or recipient is *chayei sha-ah* is immaterial. Unlike Waldenberg, he does not raise distinctions such as *goses* vs. *treifa*. He does not enter into cases from the Talmud and medieval codes to prove his point, as does Waldenberg. He simply states that the procedure is "double murder" perpetrated, of course, by the hands of the doctors. His conclusion as presented here, as well as Waldenberg's is medically inarguable, given that cardiac patients may have lived days or years longer treated with other extant treatments of the time. By undergoing heart transplants, they would live only a short time, most only hours, and the donor would die immediately. At the time of these early transplant procedures, the problem of organ rejection in the recipient was not solved, as noted previously, and the fate of the recipient was, in fact, in the hands of the doctors. Removing the pulsing heart of the donor, of course, would cause immediate death, again at the hands of the doctors. Feinstein, at the time this responsum was issued, assumed that the pulsing heart was the source of respiration, and therefore it determined life as in Yoma 85a. The concept of brain stem death, as explained in the introductory section of this paper, and which would come to affect Feinstein, was not fully understood at the time.

Regardless of whether the recipient agreed to the procedure, Feinstein posited that Jewish law demands that the doctors must be severely punished as murderers. In regard to the recipient giving permission for the procedure, Feinstein asserted that "Man does

not have permission to commit suicide." [44] He concludes, "This is the *t'shuvah* that I am publishing in regard to this, no less and no more."[45] His conclusions regarding the impermissibility of heart transplantation and those of Rabbi Yehuda Waldenberg are identical. However, while they deal with the same medical statistics and *halakhic* tradition, they treat them differently which ultimately will shed light on how their positions come to differ in the future. Waldenberg writes a lengthy responsum refuting any possibility that heart transplantation could be acceptable within the *halakhah*. He raises then discredits the categories of *treifa* and *goses* which might be considered valid states of being for a donor. In so doing, he delves into lengthy Talmudic examples of these categories. Survival rates of heart transplants are only a minor point in his discussion. Feinstein, in his succinct response refers to scientific data and cases, then relates the consequences of heart transplantation to the *halakhah*.

The depth of Feinstein's thinking and this responsum are revealed in his handling of the corollary questions Weiss has asked. Each contributes to Weiss' and Feinstein's later decisions on the matter of heart transplantation.

Weiss queries about the status of a person who has been decapitated but whose body jerks and spasms. Feinstein refers to Rambam's comments on a case in *Mishneh Ohalot*[46] regarding who defiles the tent. He rules that the decapitated person is *tamei* despite the purposeless jerks and spasms of the disconnected body. His soul has departed, with the severance of the head from the body and therefore he is *halakhically* dead. Decapitation, Feinstein continues to explain, differs from the case of a person whose neck has been injured, severing the trachea and esophagus. This person, while he will surely

[44] Ibid.
[45] Ibid.

die, is still alive, and may willfully gesture to give his wife a get and release her from the bonds of levirate marriage.[47] Until respiration has totally ceased, indicating that his soul has departed, the person is part of the living community. Once the soul has departed, indicated by total lack of respiration, the person is *tamei*, i.e. *halakhically* dead.

The relevance of these distinctions seems to lie in what determines life. Feinstein is definitive that the head and/or brain are critical to the presence of *nefesh*, both breath and soul, as the determinants of life. Conversely, Feinstein regards the lack of circulation between the head and body as an indicator of death. These observations will become more significant as the sophistication of medical science's understanding of the brain and brain death advance, as such knowledge will cause Feinstein and other Jewish authorities to reconsider the permissibility of heart transplants.

Concurrent with *halakhists* raising questions about which criteria define the boundaries between life and death, secular scientists were also considering and learning what factors actually signified death and who would be an appropriate donor. The report of the 1968 Ad hoc committee of the Harvard Medical School, published a neurologic definition and criteria for death that stated:

> Brain-dead donors, with the assistance of a ventilator, have oxygen circulating in their blood that maintains the usefulness of organs for transplant. Brain death is declared after a series of tests have been performed. The cause of death, such as trauma, intracerebral hemorrhage, hypoxia or primary brain tumor must be known. Patients with potentially reversible conditions. . . . are not considered potential donors. The patient, therefore, is in an irreversible coma and does not respond to pain. There are no brain-stem reflexes so the patient does not breathe, swallow, or blink. Apnea testing shows that the patient cannot breathe when taken off the ventilator. After death, tests ensure that the deceased patient is a suitable donor, without disease or infection that could possibly be transmitted to the patient.[48]

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[46] Rambam, *Mishneh Ohalot*, 1:6.
[47] This case is discussed in Gittin 80.
[48] The Encyclopedia of Bioethics, s.v., "Organ and Tissue Transplants."

"These criteria amounted to total unresponsiveness and loss of the brain's integrative control of body physiology as measured by various clinical and technical tests."[49] In effect, this is analogous to the *halakhic* status of a decapitated person, in whom there is no circulatory function sustaining life, and whose soul has therefore departed.

Another pertinent question Weiss asked concerns an issue raised by the Rema in *Orach Chaim* 330:5,[50] that forbids the posthumous cesarean section of a pregnant woman who seems to have died in labor, in order to save the fetus. The Rema determines that the cesarean is forbidden because even though breathing has ceased by all indications, the precise moment that this occurs may not be ascertained with certainty. Weiss's question is why, under other circumstances, death could be declared even in the time of the sages, and why we are not able to do so now. Feinstein explains that the pregnant mother's breathing may become so shallow and irregular that it cannot be detected with certainty. By the time sufficient time has elapsed to be absolutely certain of the mother's death, the fetus would no longer be viable due to lack of oxygen. He compares this to the Rambam permitting closing of the eyes of a patient who appears to be dead, but has not yet been declared *halakhically* dead. Feinstein asserts that the latter is for the benefit of the patient before rigor mortis has set in. Therefore, the sages did not forbid it, even though a remote possibility existed that it might detrimentally effect the patient's last moments. In the case of the cesarean, Feinstein explains that to attempt the procedure would be solely for the benefit of the fetus and not the patient who may still have moments of life within her. As *halakhah* does not consider a fetus as viable life until its head has crowned, the

[49] Non-Heart-Beating Organ Transplantation: Medical and Ethical Issues in Procurement (1997), Institute of Medicine, p.20-22.

person with whom we are concerned is the pregnant woman who make still have life and soul --*nefesh*-- within her.

This ruling re-emphasizes the necessity of meticulous precision required in the monitoring of breath, for the sake of the patient's last moments of life. *Pikuakh nefesh*, preserving the sanctity of life, is one of the primary values and roots of Jewish law. This is the basis of Feinstein's ruling regarding the pregnant woman as well as the prohibition against heart transplants. That is, if death can definitively be established, then removing a fetus, or an organ, including a heart, could be permitted. The problem in 1968 was that the moment of the heart donor's death could not be determined with certainty according to the *halakhah*, and the criteria of secular society did not apply altogether. Equally as important was the statistical likelihood that the heart patient would soon die.

Feinstein thus ruled that heart transplantation is *halakhically* impermissible. Most *poskim* in the late 60's permitted some organ transplants, such as skin or eyes, among other non-vital organs. Weiss questions Feinstein about doing so when the relatives of the deceased may be anguished by the mutilation of the body. Briefly, his response addresses the piety of saving the life of "one of Israel" by severing an organ from a person who is *halakhically* deceased and transplanting it onto another. He stresses that the family needs to be assured that their loved one suffers no pain and the *mitzvah* of *pikuakh nefesh* overrides all but three prohibitions of the Torah. The difference between transplantation of a heart and other organs is that it could not at the time be *halakhically* determined that the heart donor was truly dead. Other organs from a truly dead person can be removed from the cadaver and without compromising the sanctity of the soul of the deceased, which has already left the body.

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[50] *Shulhan Aruch, Orach Chaim*, 330:5.

This multi-dimensional responsum lays the ground for a future change of legal thinking on Feinstein's part regarding heart transplantation.

Other Significant Rulings of Feinstein

Rabbi Feinstein has issued several influential rulings reflecting the changes in medical knowledge, and consequent changes in his opinions regarding heart transplantation.

Iggeros Moshe, Y.D.III:132[51]

In this responsum, issued in 1976 Feinstein appears to accept the loss of circulatory connection between the head and body in a fully decapitated individual as equivalent to death. Thus, he allowed certain non-vital organ transplants from cadavers. In the case of a heart, however, *halakhic* death of a dying individual could not be determined with certainty until the donor heart was no longer viable for transplantation. This early responsum was written at the time that brain stem death was beginning to be understood and accepted as a definition of death. The generally accepted Harvard criteria were based on death of the brain-stem and various neurological tests, as defined above. These criteria continued to be studied and refined as knowledge and technology advanced.

Feinstein's responsa of 1976 was written at a time when heart transplant technology was having success after having been halted in most centers due to failure

[51] Iyar, 1976.

rates with the early procedures. The new technologies and criteria raised more *halakhic* questions regarding the circulatory connection between head and body.

Feinstein compares the situation in Yoma 85a, in which a pile of rubble falls on a man, seeming to bury him, with the state of a sick person who appears unable to breathe on his own. The critical question, in this responsum as in Feinstein's 1968 ruling and that of Waldenberg at the same time, is how the border between life and death is defined.

In *Yoma*, the sages were concerned with whether the man showed any signs of breath, as determined by placing a fine hair under his nose. Any minute sign of movement, as Feinstein explains, justified removing the pile to save him, even on Shabbat. "If there was any doubt lest he have the slightest breath, this had to be repeated, and checked several times before he could be considered dead."[52]

In the 1970's advances in medical technologies enabled the continuation of life where it might not have previously been possible. Ventilators could prolong life by assisting the lungs in breathing. Respirators could take over the function of the lungs entirely, and were used as a form of treatment in a person who was gravely ill and who did not have the strength to breathe on his own. Attached to a mechanical respirator, medications of potential benefit could be administered. The ethical problem that concerned *halakhists* and doctors was whether the patient could, in fact, breathe independently, or whether there ceased to be any natural circulation between the brain, heart, and respiratory system after being placed on the respirator. If the patient was attached to the respirator, they could become respirator dependent and be maintained with no consciousness or quality of life. If they were removed, depending on their

[52] *Iggeros Moshe*, Y.D. III:132.

medical status prior to placement on the respirator, they might die within minutes or hours.

For example, as a chaplain on a cancer service, I made the acquaintance of a fully alive and conscious but terminally ill woman with treatment resistant lung cancer. Her doctors advised that her only hope for survival was deep sedation on a respirator that would take over heart and lung function, allowing these organs to rest so that antibiotics would have the potential to overcome the infection that was preventing the cancer drugs from helping her. She was also advised that if this approach failed, there was medically no expectation that she would be able to come off the respirator and live because removal of the respirator in her debilitated state and at her advanced age would leave her unable to survive. After consultation with her religious advisor, a Greek Orthodox Priest, and her family, she agreed to a week's trial of this approach, after which the respirator was to be removed. She clearly stated that she did not want to be sustained on a respirator indefinitely and understood that removal from the respirator would likely bring about the moment of her death. From an *halakhic* standpoint this would not have been acceptable to Feinstein nor to most *poskim*, as both failing to undergo the treatment and later removing the respirator would be tantamount to murder. Sadly, for this woman, the antibiotics failed, and upon removal of the respirator, she died within hours. It could not be determined whether she would have died in a shorter time, or lived longer than the week without this attempt at treatment.

For a person whose life and breathing was compromised and it was medically indicated, *pikuah nefesh* would require the use of a respirator.[53] Once the respirator was

[53] It should be noted that in the anecdote regarding my patient, patient choice and the removal of the respirator is where *halakhists* would differ from the Greek Orthodox Priest.

attached, Feinstein ruled that the respirator could not be withdrawn, as this might cause respiration to cease thereby bringing on the death of the patient (as in the case scenario above). He did however permit brief removal of the respirator when servicing was required. During this time, however, he urged careful observation of the patient for a period of approximately 15 minutes, while the respirator was detached, to determine whether any signs of independent breathing were observed. If there were, the respirator had to be re-attached. If there were no signs of independent breathing and all appropriate circulatory and neurologic tests were performed to ensure brain-stem death, he ruled that this was equivalent to physical decapitation, i.e. *halakhic* death. This remains the current practice of many ultra-Orthodox rabbis and doctors. This became an important ruling in the *halakhic* literature in general, and in Feinstein's continuing response to medical developments. It allowed patients to benefit from new technologies while remaining consistent with the *halakhah*. That is, the life-saving use of respirators did not have to result in an indefinite respirator-dependent state that effectively prolonged death.

Letter to the Chair of the New York State Assembly's Committee on Health

Related to the above responsum, in May of 1976, Feinstein wrote a letter in English to the Honorable Herbert J. Miller, Chairman of the New York State Assembly's Committee on Health, regarding a bill that would have defined brain-stem death as "death." Feinstein indicated that he supported the legislation, but only if a stipulation was added to it that confirmed that total cessation of respiration had occurred. This letter included the following:

The sole criterion of death is the total cessation of spontaneous respiration. In a patient presenting the clinical picture of death, i.e. no signs of life such as movements or response to stimuli, the total cessation of independent respiration is an absolute proof that death has occurred. This interruption of spontaneous breathing must be for a sufficient length of time for resuscitation to be impossible [approx. 15 minutes].

If such a "clinically dead" patient is on a respirator, it is forbidden to interrupt the respirator. However, when the respirator requires servicing, the service may be withheld while the patient is carefully and continuously monitored to detect any signs of independent breathing, no matter how feeble. If such breathing motions do not occur, it is a certainty that he is dead. If they do occur the respirator shall be immediately restarted. [54]

The above ruling is echoed in a letter dated 1984, to a Dr. Bundy, which adds that doctors who treat sick Jewish patients must adhere strictly to Jewish law, as interpreted above, regardless of how they treat gentiles. In particular, the border between life and death must be determined by respiration, not by other organs.[55]

The prelude to Feinstein's definitive position in 1976 and 1984 is found in his 1968 ruling regarding status of an individual whose head was fully decapitated but whose body made purposeless jerks. As discussed above, Feinstein ruled that such an individual was *halakhically* dead because all connection between the functions of the brain and the organs of circulation were severed, causing all breathing to cease and the soul to depart. The severance of the head from the body is akin to the severance of brain stem function from the organs of breathing. The critical point being that respiration and concomitant pulsing of the heart remains the halakhic criterion of death. Feinstein allows that this can be determined definitively by contemporary technology.

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[54] Fred Rosner and Moshe David Tendler, "Definition of Death in Judaism", The Journal of Halakha, Spring, 1989.

[55] Reprinted in ASSYA, (Hebrew), 1995.

THE DECISION OF THE CHIEF RABBINATE COUNCIL OF ISRAEL ON HEART TRANSPLANTS

A unique problem exists in Israel that does not exist in most countries. While Israel itself is a pluralistic country, the *halakhah*, civil law, medical science, and matters affecting personal status are bound in a web that affects all Israeli citizens, regardless of their religious inclinations. The Chief Rabbinate, representing Orthodox views has ultimate authority over the Ministry of Health regarding questionable medical practices. Paramount in the hierarchy of *halakhic* precepts is that murder is one of the three transgressions for which there is no forgiveness. In the early responsa of Waldenberg, Feinstein and others, heart transplantation was condemned as double murder.

By the mid-1980's heart transplantation was a common successful procedure practiced in most Western countries. In Israel however, doctors were constrained to adhere to the same hierarchy of *halakhic* precepts that Waldenberg and Feinstein set forth in their arguments, thus heart transplants were prohibited.

The early rulings and sentiment of Waldenberg and Feinstein reflect those of the ultra-Orthodox community, to which the Rabbinate Council was bound. These included stringent prohibitions against any procedure that could remotely be considered to result in "murder". As demonstrated, respiration in *halakhic* literature is the unequivocal definition of the line between life and death. The ultra-Orthodox community considered removing a heart, even from a *treifa*, to be tantamount to murder because of the ambiguities of determining the time of death, i.e. cessation of respiration as discernable

from the nose. The Chief Rabbinate remained stringent in its prohibition against heart transplants.

From the time of Waldenberg's first responsum on heart transplantation, medical realities changed. As discussed in this paper's general introduction to the history of heart transplantation, 1980 became a turning point in the success rate of attempted transplants due to the development of the anti-rejection agent Cyclosporin A.

By the early 80's transplantations abroad were very successfully saving lives. 80% of recipients lived more than one year[56], and 70%[57] remained alive more than five years. Israelis however who needed a transplant in order to remain alive were either too ill to travel or could not afford it. Israelis were being denied a life-saving procedure, under the religious judgement of what constituted murder.

By 1986 the situation became untenable. The rising success rates in various Western countries lead the Ministry of Health in Jerusalem to request the Chief Rabbinate to determine the position of Jewish Law regarding heart transplants in Israel. A committee was established, headed by Chief Rabbi Shlomo Goren, rabbinic scholars, and rabbis representing Ashkenazi and Sephardic interests, plus two physicians who were knowledgeable in medicine and *halakhah.*[58] Given the status of Orthodoxy in Israel, no rabbis representing other streams of Judaism were included.

The committee considered a number of *halakhic* and medical factors in arriving at a responsum. In the eighteen years since the first transplants, survival rates had increased dramatically, due to the use of anti-rejection drugs. Reliable scientific methods had been

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[56] Chayei-olam, as opposed to chayei-sha'ah
[57] Cited herein from D.J.Cohen, et.al. "Cyclosporine A: A new agent for immunosuppressive organ transplantion," Ann. Inttern.Med. 101 (1984) pp.667-682.
[58] "Heart Transplantation in Israel", ASSYA. 2 (3) 1987. pg.70-81 (Hebrew).

developed to establish with certainty that respiration of the donor had ceased irreversibly. Rabbi Moshe Feinstein had issued his responsa, Y.D.III:132 in which he accepted brain stem death as a determinant of death, providing that all appropriate tests were performed. A significant influence on the decision was the fact that Rabbi Moshe Tendler, grandson of Rabbi Feinstein sent a letter dated July 5, 1986, to the Director of the Hadassah Medical Center in Jerusalem, Rabbi S. Rappaport, confirming that Feinstein had recently permitted a heart transplant in the United States. Rappaport, the husband of Rabbi Feinstein's granddaughter, provided further verification of this fact.[59] "The transplant committee had also been informed that Rabbi Yitzchak Weiss, head of the Rabbinic Court of the Eidah ha-Charedit in Jerusalem... recently sent a letter supporting a patient who was raising funds for a heart transplant procedure abroad."[60] Feinstein's two representative responsa demonstrate that his position regarding heart transplantation evolved in light of scientific advances, without diminishing his adherence to the precepts of *halakhah* regarding life and death. This accorded him high credibility with most Orthodox authorities.

The most critical factor that is emblematic of the early prohibitions against heart transplantation had to do with the inability to conclusively establish the death of the donor, and the question of whether a recipient's life would be shortened by the procedure. With high success rates, the latter ceased to be a significant issue.

Criteria for determining the time of death of the donor and assuring that the doctors were not performing murder from a *halakhic* standpoint still needed to be established. Relying on visual observation of the cessation of respiration as performed in

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[59] "Heart Transplantation in Israel" ASSYA 1 (2) 1989. p.8.(English-Hebrew)
[60] Ibid.

pre-modern times was too unreliable. Waiting long enough to be certain rendered the organ non-viable. The initial Harvard criteria of "Brain death" was too broad to satisfy the *halakhic* requirement that respiration must have irreversibly ceased in order to pronounce death. However, during the 1980's, using neurological and medical criteria, researchers were able to distinguish between the functions of different parts of the brain and verified that the brain stem, not the beating of the heart, controls automatic respiration. The Harvard Criteria, as outlined in the explication of Feinstein's 1976 responsa, was amended to include brain-stem death as the criterion for death. Definitive tests to measure oxygenation to the brain, and the status of the brain stem were developed so that it could be scientifically established that the brain stem had ceased functioning, and respiration had irreversibly ceased.

The Committee took all of the above into account in issuing its recommendation to permit heart transplantations at Hadassah Medical Center, according to a precise protocol.[61] To establish clear pre-requisites for viability of a donor it required that certain medical facts had to be established. First, clear knowledge of the cause of injury was required. Cardiac arrest was not acceptable, as according to *halakhah*, all measures to revive the person, such as resuscitation, must be attempted. Second, absolute cessation of spontaneous breathing must be ascertained. Even an attempt at spontaneous breathing indicates that the person is not *halakhically* dead and the brain stem is functioning. Third, detailed clinical proof of injury to the brain was required. Incidents this might include are: Clinically verified absence of brain stem function arising from severe cerebral trauma following an accident or injury, with C.A.T. scan evidence of hemorrhage in the brain tissue; Anoxic brain damage with temporary or prolonged

insufficiency of oxygen. To this the Rabbinate added that in order to fulfill the requirements of Jewish Law, an objective, scientific test of the brain stem (BAER) must be performed. Finally, proof that absolute cessation of independent respiration and inactivity of the brain-stem continued for at least twelve hours despite full, customary care had to be provided.

On *Rosh Chodesh, Marchesvan*, 5747 (Nov. 3, 1986) the Chief Rabbinate Council of Israel accepted the recommendations of the committee as part of its *p'sak din* permitting heart transplants at Hadassah Medical Center, Jerusalem[62] from accident victims.[63] Additionally, the ruling stipulated that the Ministry of Health and the Chief Rabbinate would participate with each other, by including a member of the Chief Rabbinate as a member of the team establishing death. Prior written consent to donate the heart was to be given by the donor or his family so that coercion would not be possible at the last minute. The Ministry of Health would participate with the Chief Rabbinate in a Review Committee to examine all cases of heart transplants and would issue regulations in accordance with all of the above procedure.

These procedures and the four page appendix detailing the medical protocol and principles for establishing the death and viability of the donor have been followed at Hadassah hospital, Ein Kerem, since 1987, with success rates comparable to those in major medical centers abroad. The actual number of transplants, however, is low. Many Israelis remain reluctant to donate organs for fear of *nivul hamet*, desecration of the dead. Many doctors will not perform the procedure without clear, objective evidence that this

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[61] Full details of which are provided in Appendix B.
[62] Hadassah, being easiest to monitor due to its proximity to Jerusalem and established relationship with the Rabbinate.

follows the donor's wishes, and some will not in any case. However, as Rabbi David Golinken stats in his responsa on transplantation, that due to the survival rates, "transplants are now without question a form of *pikuakh nefesh* which takes precedence over most of the prohibitions in the Torah."[64] Similarly, the Orthodox Rabbinical Council of America accepts heart transplantation and provides a donor form that satisfies their requirements for a permissible donation.

This ruling represents a milestone in Jewish medical ethics by enabling *halakhah* and medical science to come together permitting a life-saving procedure that has previously been rejected on *halakhic* grounds. On the other hand, by its presence, it stemmed the tide of what might have been inevitable - the performance of heart transplantation at other medical centers in Israel without any rabbinic supervision.

Shimon Glick, M.D., Head of Internal Medicine at Soroka Medical Center in Beer-Sheva comments that "the definition death is not a medical one. The decision can be legal, *halakhic,* moral, or cultural, the role of the doctor being to establish the facts."[65] The decision of the Chief Rabbinate established the permissibility of heart transplantation as an *halakhic* decision, with strict medical criteria under which it must operate. This *halakhic* decision positively affects access to heart transplantation to all Israelis. The fact that Rabbis Feinstein, Weiss, and Rappaport, as well as others, had permitted the procedure influenced the decision of the Chief Rabbinate. Other Orthodox rabbis, adherent to the same *halakhic* sources, however did not and still do not agree. The implications of this will be discussed in the concluding chapter of this paper.

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[63] As stated in a footnote to the ruling, accident victims, as long as they fulfill the requirements of the appendices, are at least *treifa*. Thus, those eligible as donors are already in a limited category where certainty of their death is ensured.
[64] Golinken, *"t'shuvah b'inyan trumah"*

[65] ASSYA, (Jerusalem III (1), 1997) p.12.

Responsum Tzitz Eliezer, Nov. 1986 - The Prohibition against Transpanltation of heart and live from one person to another

Immediately following the decision of the Chief Rabbinate Council in Jerusalem to permit Heart Transplants in Israel, Rabbi Waldenberg issued a lengthy responsum condemning the decision and doctors who would perform the procedure.[66] I will be examining the first two sections, as they most reveal Waldenberg's most pressing concerns. These focus on Waldenberg's opinion, and the question of whether the essence of the life of man is in the brain or in the heart.

Waldenberg's Opinion

In this responsum, as in the earlier one addressed in this paper, Waldenberg immediately reveals his opinion and reason for writing at this time. He writes in response to what is occurring medically at the time of writing:

> It has shocked me to hear about the dreadful occurrences recently at Rambam hospital in Haifa, and at other hospitals that treat lightly the idea of transplanting the heart or liver from one Jew to another under the name of "donor" and "recipient". I have received many requests to give my Torah opinion on this, and find myself obligated to do so at this time.[67]

Echoing his earlier argument Waldenberg asserts that "heart transplantation is an act of murdering the donor, who is already on the edge of life, and in many instances murdering the recipient who may die after a short while, and might live if his natural

[66] This responsum was issued on Nov. 4, 1986. References to it here are to its later publication in ASSYA, Kislev, 1990, pgs. 115-128.(Hebrew)
[67] ASSYA, p.115.

heart had not been removed."[68] This of course is not a new opinion. It appears to be Waldenberg's central premise, as it was stated earlier, after the first heart transplant in 1968. Although almost 20 years have passsed, Waldenberg does not acknowledge the changed survival rates at all but rather reiterates his position that the procedure constitutes "double murders." He does acknowledge that several *g'dolim* of our time have permitted this procedure based on new circumstances, however he argues that their reasoning was based on performing the procedure on non-Jews. While he does not state this, it would be reasonable to assume that he is aware of the new methodologies and new survival statistics, known by the committee of the Chief Rabbinate Council, but finds them irrelevant. ". . . but to come here to our Holy Land to perform such an awful thing as this by Jews, from Jewish donors to Jewish recipients is terrible and shocking."[69] Once again, he accuses the doctors of being "wicked murderers."

As with the previous responsum examined in this paper, Waldenberg's central objection is theological, pertaining to Jews and to the Holy Land. It is admittedly an argument for a *haredi* community. He says: "among the *haredim*, the extremely pious, every heart and every person who sheds blood, is judged according to the *psak* of Rambam,[70] who ruled: "that anyone who has a sin such as this (murder) on their hands, is completely wicked and there is no positive *mitzvah* that he can perform in all the days of his life that will lessen the severity of this sin."[71] With this decisive stance, there is no room for changed data to alter his position. He cites the interpretation of sages from Rambam to Luria and applies them literally, reflecting an ethos and knowledge base that

[68] Ibid.
[69] Ibid. p.116
[70] Ibid.
[71] Rambam, *Mishneh Torah* 4, Rotzeakh, 5:9

rejects change. Waldenberg simply applies text to support his theological position. Not all *poskim* approach decision making this way, as we have seen, for example, with Feinstein.

David Ellenson emphasizes the diversity of conclusions that *poskim* may arrive at using the same methodology of "*halakhic* formalism", in the context of the same medical circumstances. Ellenson writes:

> Adherence to a common methodology does not preclude pluralism within the system [here, *halakhic* formalism]. Authorities within any system of law can read precedents stringently or leniently. Some may assert that one set of precedents or values contained in the canon of a tradition is relevant to the matter at hand, while others assert that such precedents either have no bearing or have been completely misread."[72]

Continuing, and particularly relevant to Waldenberg, he explains:

> "*Halakhic* formalism" does not preclude lenient or demand stringent decisions. Tremendous discretion in how the sources are read remains with the rabbi who is issuing the decision. Rather, the methodology simply demands that the decision be warranted by a text taken from the tradition.[73]

Waldenberg elaborates at great length, that the doctors are tricking everyone by saying that there is such a thing as "clinical death", "a term which they invented."[74] He supports this contention by consultation with doctors who agree with him that "there is no doubt in the matter that at the same moment that the removal of the heart is performed, it has a heart beat."[75] From this perspective, the removal of the donor's heart is seen as tantamount to murder. It is notable that he consults with doctors who agree with him, and writes for a public of his own followers.

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[72] David Ellenson, "How to Draw Guidance from a Heritage,".) p.82-3.
[73] Ibid. p.88.
[74] Waldenberg, ASSYA, p.116..
[75] Ibid.,p.88

In taking this stance, Rabbi Waldenberg rejects the relevance of the scientific evidence that influenced Feinstein and the Rabbinic Council in Jerusalem to change their views on the question. These men accepted "brain death" as a valid criterion for establishing death, as long as it is ascertained that independent breathing, controlled by the brain stem, and verified by objective physical and neurological tests, has ceased. Waldenberg totally rejects this standard for determining death. He refers to situations where "brain activity has stopped in a number of people prior to heart activity ceasing and they continue living in this manner, and sometime later awaken to life as it was previously."[76] Without distinguishing between varying medical situations under which this might occur, Waldenberg simply concludes, on the basis of his previous observation, that "removal of the heart after brain activity has ceased is certainly killing people." In so doing, he rejects the criteria that the Harvard Committee and the Rabinic Council established for determing death. An alternative way other *poskim* such as Rabbi Tendler approach this situation is "on the basis of the talmudic principle of *'shinnui ha-ittim'* - a changed reality. [Tendler is] able, in effect, to assert that talmudic texts must be read in accord with the judicial principle of 'purposive interpretation'."[77] That is, in the halakhic formalist system, all *poskim* have at hand the same body of traditional texts, from which they may select one or more sets of precedents or values that they regard as relevant to their interpretation. Tendler, as a medical doctor, contends that contemporary sophisticated medical tests of the present suggest that the classical definition "respiratory and circulatory death" must be understood in a broader way."[78] Responsa of Feinstein,

[76] Ibid.
[77] Ellenson, How to Draw Guidance, p.85.
[78] Discussed in Ellenson, Ibid.

his father in law, not surprisingly, reflect an interpretation whose purpose allows for the reading of contemporary science into the texts.

Waldenberg's theology on the other hand seems to leave no room for "science". In fact, he seems determined to bypass or even refute it. In rendering his decisions he writes for a public that is ultra-religious, and colleagues who share his stance. To deviate in a liberal direction would diminish his credibility. As he has stated in various ways elsewhere, "the soul of man does not belong to a recipient, nor does it belong to any person. Rather it belongs *to HaKadosh Baruch Hu*, the one who gives breathe and spirit to man."[79]

The Essence of Human Life in the Brain or in the Heart?

In this section of the responsum, Waldenberg specifically addresses the matter of whether the heart or the brain is determinative of life. Feinstein, Tendler, the Rabbinic Council and others have accepted the medical knowledge that the brain stem controls the circulatory process of the heart and respiratory process, thereby making it possible for Orthodox Jews to undergo heart transplants without violation of the *halakhah*. Waldenberg, however, does not accept this. He maintains the literal and immutable stance of Jewish law; that the declaration of death, as ascertained by cessation of respiration, can only be made after the heart has stopped beating. The consequence of this, for those severely ill cardiac patients who follow him, is that they are denied the benefit of *pikuakh nefesh* that a more liberal stance would provide.

[79] Ibid.

Waldenberg describes his argument as it existed and was resolved in ancient times. Galen, a Greek physician and philosopher, established that life depends on the brain. Aristotle reasoned the opposite. And "our great teacher and authentic doctor, Rabbi Moses Maimonides z"l decreed according to Aristotle, that all life depends on the heart."[80]

In 1968 through the early 70s the universal question of both ethicists and clinicians was whether heart transplants could be performed at all, given the low survival rates. Waldenberg then approached the question as one of whether a *treifa* or a *goses*, given his or her status as *chayei sha'ah* could qualify as a donor, and whether the procedure would murder the recipient. In the responsum we are looking at now, the question that the scientific community has dealt with is whether brain death is a valid criterion for determining that death has occured. Waldenberg has not ignored the question. He has rejected its validity, as discussed above. The question Waldenberg now deals with is whether the heart or the brain controls life. It is problematic, however, from a bio-ethical point of view that Waldenberg's arguments rest entirely on the views of ancient sages from ancient times and are not moderated by new considerations. "In an era when sophisticated medical tests were not available, Jewish law naturally employed the criteria of its day - the observation that breathing had ceased and that all external bodily movements had completely stopped - to confirm that death had occurred."[81] Today's medical science, with which matters of bio-ethics are concerned, employs

[80] Waldenberg, p.118.
[81] Ellenson, "How to Draw Guidance," p.85.

sophisticated tests and knowledge. This has led Dr. Rosner and Rabbi Tendler to conclude that "The classic 'respiratory and circulatory death' is in reality brain death."[82]

The Rambam[83] made reasoned decisions based on his position as a physician and piety as a Jew, relying on the knowledge of his day. Relying only on the sages, however, does not adequately address the ethical questions of today, as explicated above. In our day, would Rambam perhaps have used the medicinal knowledge of our time, and reasoned along with Feinstein and Tendler in treating us? Waldenberg does not address this. Rather he continues to reinforce his point by referencing only sources that support his contention.

Waldenberg tells us that the Hacham Zvi[84] writing in the name of the Ari[85] "that the essence of life is connected to the heart. . . Even the Godly and exalted Rabbi Isaac Luria of blessed and pious memory, through whom the spirit of God spoke, agreed that what is known to all people of the world, that the heart is the seat of the essential soul. And it is the place of the final death after the death of the last of his organs, far from it and near."

Waldenberg takes issue with contemporary medical interpretations of the classical passage in Yoma 85. This passage, of course, defines death as the time after breathing has ceased. Waldenberg claims that the doctors that the doctors want to think that the cessation of breath is determined by the cessation of brain activity, and therefore that the brain determines life.

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[82] Fred Rosner and Moshe David Tendler, "Determining the Time of Death" The Journal of Hallakhah and Contemporary Society XVII (1989). Cited in Ellenson, "How to Draw Guidance."
[83] Rambam was the physician par excellance of his time. He wrote multiple volumes of treatises on the treatment for virtually all known conditions of the time. These were based on the clinical theories of disease and healing prevailing in his time.
[84] Tvi Ashkenazi (1660-1718)
[85] Isaac Luria

Waldenberg points out that Rashi interprets the passage in Yoma to say that if there are no signs of breath from the nose, nor pulsing of the heart, then the person may be dead. "But all who see that there is life in the heart, it is certainly clear that according to law, he is living."[86][87]

After presenting several proof texts Waldenberg summarizes his position:

> Now, after all, the matter has been made completely clear to us, that according to the *Halakhah*, the essence of life is in the heart. There is no room for doubt that regardless of any thing further that is said about the working of the heart of the donor, that he is living in all ways, and the one who removes his heart is to be judged as a murderer.[88]

Waldenberg's greatest concern in this responsum is that heart transplants will continue by Jews on Jews in Israel, as he has stated earlier. He is particularly derisive towards doctors who permit and perform the procedure. He writes: "And the opinion of the doctors who are in error about these matters, which our holy sages have established for us, cannot change the rules of life in order to mislead us about a position that opposes the sages."[89] Later he states that even a position of *halakhah* or the sages that appears to go against nature cannot be changed, "as nature is a product of *HaKadosh Baruch Hu.*"[90] His position is informed by a theology of ultra-Orthodoxy that places God, as author of nature, above all scientific machinations. Human beings are only part of God's greater plan. Waldenberg's intention in this responsum is not only a vilification of those who disagree with him, but a statement of warning that Jews must conform to God's will as he interprets it, or danger may befall *klal Yisrael* and the Holy Land.

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[86] Waldenberg, p.119.
[87] Waldenberg is not alone in his opinion (e.g. Aaron Soloveitchik)
[88] Waldenberg, p.119.
[89] Waldenberg, p.119.
[90] Waldenberg, p.120.

Waldenberg's opinion remains unchanged from the previous responsa 20 years earlier. He leaves the cardiac patient in the hands of *HaKadosh Baruch Hu.* He remains, as it were, at the beginning. It is God who breathed life into man (Genesis) and it will be God who will determine when breath is gone. This will most likely be his position in another 20 years.

Conclusion

The initial question I posed in this paper was "how is it that various late 20th century rabbis located in diverse venues have ruled differently on the question of whether or not heart transplantation, a potentially life-saving procedure, is permissible?" I have examined several responsa of Rabbi Yehuda Eliezer Waldenberg (Tzitz Eliezer) and Rabbi Moshe Feinstein, prominent 20th Orthodox poskim, plus the decision of the Chief Rabbinate Council of Israel regarding the permissibility of heart transplantation. All of the *poskim* work with the same inherited legal tradition, methodology, and medical facts, yet have arrived at different rulings and emphases regarding this question.

The factors that have emerged as influencing the responsa include: theology, legal/ sacred texts, medical science, and sociology. In some instances a major sociological factor is who the *posek* is writing for and how he wants to be seen. In others, 'purposive intention', motivates the *posek* to begin from his pre-determined stance, and selectively incorporate text and the question at hand to arrive at the desired response. All of these factors are utilized in the responsa examined. Where they differ is in which of these factors are given preference, why and what the consequences of doing so are.

I will discuss my conclusions through a summary of how each of the responsa demonstrate utilization of these factors and what they reveal.

The first and most pressing question addressed by all of the *poskim* following the initial heart transplantations in the late 60's was whether the procedure constituted murder of the donor or recipient or both. At this time, Feinstein and Waldenberg were entirely in agreement; first, that based on *Yoma* 85b, respiration of the donor would have to cease, thereby causing his murder, and second, that the recipient either died or lived only a short

while and might have lived longer without the procedure. Consequently, both *poskim* ruled that the procedure resulted in double murder and was unquestionably forbidden.

While both relied on *Yoma* 85b as the primary source, their arguments were entirely different in form, which hints at how their rulings came to differ later on. As soon as the first heart transplant had been performed, Waldenberg issued a ruling decrying the procedure a double murder and rendering harsh judgment against the "murderous" doctors who performed it. He then examined the matter from every possible angle to refute the possibility of any other interpretation. His stated conclusion was theological: To permit such a procedure in our time would lead to a downward moral spiral. Waldenberg therefore concludes: "And the healer of all flesh will send complete healing to all the sick of his people if Israel."[91] Waldenberg makes it clear to his peers and his followers that he is thoroughly and strictly ultra-Orthodox. Overall, he preferences theology, interference with "the healer of all flesh" as the reason the procedure cannot be performed. Next he preferences source texts examined from every angle to make an airtight case. This reveals an apparent sociological preference to be regarded as of strictness beyond refutation.

Feinstein, in a single paragraph, ruled the procedure a double murder not worthy of any further comment. Like Waldenberg, he leaves the cardiac patient in God's hands. While he summarizes his textual reasoning, unlike Waldenberg, he doesn't appear to have the same concern with appearing ultra-strict. Feinstein's responsum was a reply to a series of questions from Rabbi Weiss who was to become the Chief Rabbi of Israel. In Feinstein's responses to some of the other questions however, his reasoning illuminates the points that may allow him to become more lenient in the future. For example, Rabbi

Weiss queried about a case in which a man who has been decapitated, but whose body jerks and spasms. Feinstein rules that severing the head from the body terminates the brain-respiratory connection, so the man is dead; his soul has departed. As medical science developed increasingly sophisticated methods to assess brain function and determine when the brain stem (the part of the brain that controls respiration) is no longer functioning, Feinstein began issuing rulings that remained faithful to Jewish law, but incorporated the sophistication of medical technology. The prime example of this is his letter to the Chairman of the New York State Commission of Health in May 1976 regarding its legislative proposal to accept brain-stem death as death according to a refined definition of the Harvard Criteria. Feinstein indicated his support of the legislation, but only if it stipulated that neurological tests proved that respiration had ceased irreversibly, thus remaining consistent with Jewish law.

Feinstein's son-in-law, Rabbi Moshe Tendler, holds a doctorate in biology and heads the Biology Department at Yeshiva University. It is reasonable to assume that Tendler's presence in Feinstein's life, brought intimate knowledge of the sophisticated medical technologies close at hand. As we have seen, this did not compromise his Orthodoxy. He continued to place God at the head of the spectrum, and to maintain adherent to Jewish law, but he incorporated the changes in medical sciences into his responsa, and employed the legal principle of '*shinui-haittim*', changing circumstances.[92] He remained faithful to Jewish law while making it possible to use hearts from donors who were brain-stem dead, i.e. dead by proven cessation of respiration, not by murder.

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[91] Tzitz Eliezer, 25:5:5.

[92] For example, many laws of the Torah, Talmud and codes have ceased to be relevant in our day. We treat. rather than isolate lepers. We don't stone rebellious sons, which even sages of the Talmud could not accept as having been meant to be followed.

The consequence of his ruling, at a time when heart transplantation had a high survival rate was that the lives of many cardiac patients could were saved, or significantly lengthened.

In the mid-1980's, heart transplantation was a relatively routine procedure in most Western countries. With immunosuppresant and anti-rejection medications, heart recipients lived many years of healthy life. In Israel however, bound by strict interpretations of Jewish law and inhabited by a Western-minded population, the Chief Rabbinate Council had to make a decision regarding permissibility of the procedure, or lose control over whether and how it was performed. A committee of Rabbis, doctors, lawyers and others was established to determine a ruling. Feinstein's apparent leniency was cited as influential in an affirmative ruling. The result was a complex protocol that could be utilized at Hadassah hospital in Jerusalem under strict rabbinic supervision. Orthodox theology and legal interpretation were certainly essential values prefacing the decision. Puposive intention was likely a significant component of the argument. An affirmative decision seems to have been necessitated by the sociological milieu. The ruling effectively halted initial trials that were to begin independently in Haifa, and enabled Jews to undergo the procedure under strict control of the Rabbanut.

Following this ruling Waldenberg immediately issued a responsum condemning the decision in great length and detail. He is greatly concerned that, God forfend, a Jew should perform such a murder on a Jew in the land of Israel. His theology stems not only from the universal Orthodox stance that God is the author and ultimate ruler of all, but that carrying out this procedure by Jews on Jews in Israel will have consequences of messianic proportions. This remains his first and foremost concern. Certainly others

such as David Bleich and Aaron Soloveitchik hold similar views. Waldenberg stands out among ultra-Orthodox *poskim* as not even considering the possibility of the procedure being permitted. His first word and his last word and all words in between condemn the procedure and protect his ultra-ultra-Orthodox persona.

Appendix A.

Important Halakhic Terminology related to Heart Transplantation

Following are several important terms and classic citations in the Jewish literature that appear frequently in matters related to heart transplantation and medical ethics. The *responsa* may cite numerous other sources for these terms as well.

Goses: A dying person who is literally in the final throes of death, generally assumed to be within 72 hours of death. "Death rattles" may be heard from his throat. "The goses is considered to be living in all manner."[93] That is, up until the moment of death, he retains the full legal status of one who is living in all regards. Physical actions that cannot be done to him include: "One may not bind his jaws, one may not stop up his windpipe. . . .until the moment of death."[94] "One may not move him or wash him or place him on the sand or salt . . . until the moment of death."[95] One may not close his eyes. One who touches or moves [before the moment of death] is as if he has killed him. Rabbi Meir used to compare a dying man to a flickering lamp: the moment one touches it he puts it out. So to, whosoever closes his eyes is accounted as though he has snuffed out his life.[96]

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18. *Tractate Smachot*, 1:1. *Smachot* (also known as *Evel Rabbati*) is an extra-canonical tractate considered to have been redacted in the eighth century, but may possibly be of *Tannaitic* origin. A text by the name of *Evel Rabbati* is cited in the *Talmud*, although it is not identical to the Tractate itself, as explained by Dov Zlotnik in his translation of *The Tractate Mourning*, New Haven, Yale University Press, 1966. The citations in this paper are from Zlotnik's publication of *Tractate Smachot*. The translations are my own, from the appended Hebrew text.

[94] Sm.1:2

[95] Sm. 1:3

[96] Sm. 1:4

Treifa: A term generally pertaining to an animal that is unfit to be eaten, such as one suffering from an organic defect, or ritual impurities. It is assumed that the animal will be dead within a year. A human being also may be considered *treifa,* on the basis of medical evidence. As stated by Maimonides: "It is known for certain that he had a fatal organic disease and physicians say that his disease is incurable by human agency and that he would have died of it even if he had not been killed in another way."[97] Other examples of a *treifa* include one sentenced to death, struck with a mortal blow, bitten by a rabid dog (medieval), or mortally wounded in a traffic accident (contemporary). Legally, a *treifa* is distinguished as non-viable life. According to the *B.T. Sanhedrin* "One who kills a *treifa* is exempt from punishment."[98] Maimonides explains that, "One who kills a *treifa* is exempt from punishment *b'dei adam* (by human courts). . .but is culpable *b'dei shamayim* (by divine justice)."[99] Elliot Dorff elucidates that Rashi concludes, in his commentary on *B.T. Sanhedrin* 78a, that a "*treifa gavra ketila hashiv lei.*" (A treifa is considered as a dead person.) That is, his situation is, "analogous to death, but not equated to it."[100]

Chayei Sha'ah: As opposed to the terms *goses* and *treifa*, which are legal categories, *chayei sha'ah* is less precise language, referring to one who doesn't have long to live, generally the time after he has been diagnosed with a fatal illness which he will not survive longer than a year. He is still considered to be fully alive and everything must be done to help him, as his fate could possibly be reversed. Rabbi Moshe Feinstein defines

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[97] *Mishneh Torahh, Hilkhot Rotzeah* 2:8.
[98] *Sanhedrin, 74a.*
[99] *Mishneh Torahh, Hilkhot Shikhita, 10:9.*
[100] Dorff, "A Jewish Approach to end-stage medical care," p.20.

Chayei Sha'ah as "the ability to survive, but less than an entire year."[101] (See *Chayei Olam*, following.)

Chayei Olam: As above, this is imprecise language, referring to one who is not *Chayei Sha'ah,* and can be expected to live a normal life span. Feinstein explains, "The key criterion is whether one or the other has the ability to live for more than a year. *Chayei Olam*, or restoration to normal life, means that in the physician's best judgement, the patient, if properly treated, can surely live beyond a year. Distinctions beyond a year are not made."[102] Feinstein derives the distinctions between *chayei sha'ah* and *chayei olam* from a *mackhlot* in *B.T. Avodah Zara* 27b. The statement is made that in a situation of danger, we do not need to be concerned with *chayei sha'ah. Tosafot*[103], however, resolves this by drawing attention to *B.T. Yoma* 82b that says we must act "for the sake of the patient". The latter is the basis Feinstein applies to medical triage.

Heskat Chaim: The presumption of being alive. Until one is definitively determined to be dead, he is presumed to be alive and one may not take dangerous risks with his life, nor may any act be taken on suspicion of his death. *B.T. Gittin*, 28:a demonstrates this principle, "If a messenger brings a divorce document from a distant place, and the husband was old or sick at the time the messenger left, he should still deliver it to the wife on the presumption that the husband is still alive."

Dinei haTorah: A law that is directly derived from the Torah.

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[101] *Iggeros Moshe, Choshem Mishpat* II:75, May 20,1984
[102] Ibid.

Dinei deRabanan: A law codified by the rabbis of the Talmudic era.

P'sak Din: A categorical ruling on a legal matter. As discussed above, the weight of its authority depends on the authority that the community gives to rabbinic rulings.

Pikuakh Nefesh: Saving a life. Every law may be transgressed for the sake of saving a life, even Shabbat, excepting the laws forbidding murder, idolatry, and sexual crimes. This is derived from *B.T. Yoma* 82b in regards to the cravings of a pregnant woman: "for there is nothing that stands before *pikuakh nefesh* except murder, prohibited sexual relations and idol worship." [104] The Biblical source of this is found in Leviticus 18:5, "you shall keep my precepts and my laws and man shall do them to live by them." [105]

Hilul haShem: A sin against God, a desecration of God's name.

Sh'at haMavet: The classic Jewish definition of death is described in the *B.T, Yoma*. The context is the citation of several circumstances under which one may desecrate Shabbat, including the circumstance in which debris of a collapsing building falls upon a person and it is not known whether he is alive or not. The *Talmud* determines that "One must search through the debris for his sake [even on Shabbat]. If one finds him alive, one should remove the debris, but if he is dead, one leaves him there [until after Shabbat].[106]

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[103] Avodah Zara, 27b
[104] *Yoma* 82b
[105] *Leviticus*, 18:5
[106] *Yoma*, 82b.

The critical determinant of death is:

> How far does one search [to ascertain whether he is dead or alive]? Until [one reaches] his nose. Some say: Up to his heart. . . . [others] life manifests itself primarily through the nose, as it is written[107]: "In whose nostrils was the breath of the spirit of life."[108]

[107] *Yoma* 85a.
[108] *Genesis* 7:22.

Appendix B. Protocol adopted by the Israeli Chief Rabbinate Permitting Heart Transplants in Israel. (Copy inserted)

Appendix 1 to the Decision of the Chief Rabbinate Council of Israel on 1 Marcheshvan 5747 (3 November 1986)

This protocol was written at Hadassah Medical Center, Jerusalem. Section 4.3.6 and Section 5 were added to the original text in accord with the decision of the Chief Rabbinate Council on 1 Marcheshvan 5747 (3 November 1986).

1. כללי

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התמלאו שלושה השלבים. המפורטים בנוהל זה, במלואם ניתן יהיה לקבוע מוות מוחי, ע"י צוות רופאים, לפי הליך המפורט בנוהל זה.

1. General

This protocol is an application of the decisions of the administration of Hadassah Medical Center and the Medical Committee regarding procedures for establishing brain death. Diagnosis of brain death is based on three essential steps. Complete compliance on the part of the medical team with these three steps, as detailed in this protocol, can establish brain death.

2. Purpose

The purpose of this protocol is to establish uniform principles for establishing brain death, the requisite composition of the medical team, criteria for establishing brain death, and accountability.

3. Definitions

3.1 Brain Death
Absolute absence of any brain stem function.

3.2 Severe Cerebral Trauma
Injury of the brain tissue following an accident or injury according to clinical criteria.

3.3 Severe Cerebral Hemorrhage
C.A.T. scan evidence of hemorrhage in the brain tissue.

3.4 Anoxic Brain Damage
Damage to the brain tissue due to even a temporary insufficiency of oxygen supply.

3.5 Coma
State devoid of wakefulness in which the patient is unresponsive and cannot be wakened. A comatose patient does not open his eyes, does not communicate, does not hear instructions, and does not move his extremities in response to pain stimulus (except spinal reflex).

4. Criteria for Establishing Brain Death

General

Diagnosis of brain death is to be based on the following three essential steps:
Step I: Presence of prior conditions.
Step II: Identification of misleading conditions which might confuse test results.
Step III: Essential tests which establish brain death.

4.1 Step I: Presence of Prior Conditions

4.1.1 A state of coma and the absence of spontaneous respiration (the patient is ventilated by a mechanical respirator).

4.1.2 Clear evidence of irreversible damage of known etiology to the structure of brain tissue.

4.1.3 If irreversible damage to the structure of brain tissue is found, it must be confirmed for a specific, minimum period of time. During that minimum period of time, one may not proceed to further steps of this protocol and the patient must receive every possible and reasonable treatment.

2. מטרה

מטרת נוהל זה לקבוע כללים אחידים לקביעת מוות מוחי תוך פירוט הליך קביעת המוות, הרכב צוות הרופאים, קריטריונים לקביעת מוות מוחי ואחריות לביצוע.

3. הגדרות

3.1 *מוות מוחי*
העדר מוחלט של תיפקוד גזע המוח.

3.2 *חבלה מוחית קשה*
פציעה של רקמת המוח עקב תאונה או חבלה לפי קריטריונים קליניים.

3.3 *דמם תוך מוחי קשה*
עדות באמצעות סריקה ממוחשבת של המוח (C.T.) להימצאות שטף דם ברקמת המוח.

3.4 *נזק מוחי אנוקסי*
נזק לרקמת המוח, בעקבות הערר אספקת חמצן, אפילו באופן זמני.

3.5 *תוסר הכרה עמוק*
מצב של חוסר עירנות, ללא תגובות שממנו לא ניתן להעיר את הנבדק, נבדק כזה אינו פוקח עיניים, אינו יוצר קשר, אינו נשמע לפקודות ואינו מזיז גפיים לגירוי כאב (פרט לרפלקס ספינאלי).

4. קריטריונים לקביעת מוות מוחי

כללי
אבחנת מוות מוחי תתבסס על שלושה שלבים הכרחיים המפורטים להלן:
שלב א' – *קיום תנאים מוקדמים.*
שלב ב' – זיהוי מצבים העלולים להטעות בקביעת המוות.
שלב ג' – מבחנים הכרחיים לקביעת מוות מוחי.
פירוט שלושת השלבים ראה בסעיפים 4.1 – 4.3.

4.1 שלב א' – קיום תנאים מוקדמים

4.1.1 מצב של *תוסר הכרה עמוק והעדר נשימה עצמונית* (תולה מחובר למכשיר הנשמה).

4.1.2 קיימת עדות ברורה לנזק במבנה רקמות המוח, *שאינו ניתן לטיפול* וקיימת אטיולוגיה מאובחנת לנזק זה.

4.1.3 נמצא נזק במבנה רקמת המוח שאינו ניתן לטיפול, יש לוודאו במשך זמן מזערי קצוב, הכל בהתאם לאבחנה. במשך הזמן הקצוב תעוכב ההתקדמות לשלבים הבאים ויינתנו כל הטיפולים הסבירים האפשריים.

4.1.4 להלן משך הזמן המזערי הקצוב בו תעוכב ההתקדמות לשלבים הבאים, לפי אבחנה:

אבחנה	*משך זמן מזערי קצוב*
חבלה מוחית קשה	12 שעות
דמם תוך מוחי קשה	12 שעות
נזק מוחי אנוקסי לאחר דום לב, או תאונת הדרמה או תנק או טביעה	24 שעות

oxygenation diffusion for at least 5 minutes.

c. Partial pressure of oxygen in arterial blood after this time must show arterial PCO2 to be no less than 50 mm Hg.

d. If PCO2 pressure is less than 50 mm Hg, then the test is to be repeated. The patient is to be disconnected from the respirator until his PCO2 level exceeds 50 mm Hg.

e. In a patient with chronically high levels of CO2, the rise in PCO2 must be at least to 70 mm Hg.

4.3.6 Objective Test of Electrical Functioning of the Brain Stem – Auditory Nerve-Brainstem Response (ABR, BAER, or BAEP)

A. This test cannot be done on a patient who has prior bilateral deafness or who has suffered bilateral injury in the vicinity of the ears. In these cases brain stem death cannot be established by ABR. Therefore, such a patient cannot be considered dead as specified below in Section K.

B. One must examine the patient's ears and verify that they are clean and free of wax, inflammation and debris.

C. One must provide sound stimulus under conditions which optimize the possibility of response (viz. 10 stimuli per second at maximum volume).

D. The test should be repeated 4 times to identify (or not to identify) the waves (or their absence) in a consistent way.

E. If it becomes necessary to eliminate electrical interference, one may switch off any electrical heating device or even an ECG, if they are causing electrical interference with the test.

F. One must verify that there is no conductive artifact and no electrical induction from the ear phones. This is done by blocking the sound emitted from the earphone with an appropriate surface.

G. The test is to be repeated under the same conditions after at least 12 hours.

H. Only the exclusive presence of the first wave (from the auditory nerve) can be taken as evidence of brain stem death.

I. If the first wave is also absent, then one should try to record it from the promontorium with an appropriate electrode. This test requires piercing the tympanic membrane.

J. If there is still no response, the apparatus should be checked by trying to record waves from a normal person in the vicinity of the patient.

K. If, after all these efforts, ABR records the exclusive presence of the first wave, the test can be taken as proof of death of the brain stem and one can proceed to Section 5 of this protocol.

If the first wave is not recorded, or if additional waves are also recorded, the patient cannot be considered dead until cardiac arrest [or other tests which might be approved in the future, such as somato-sensory evoked potential].

5. Procedure for Establishing Brain Death

5.1 Diagnosis of brain death shall be established by a team of four members, consisting of three qualified physicians and a fourth member to be selected from a list approved by the Ministry of Health in accord with the decision of the Chief Rabbinate Council. The request to convene such a team will be made by the qualified physician who is caring for the patient, after having executed the following procedures:

5.1.1 Complete execution of the three steps required for establishing brain death as detailed in Section 4 of this protocol.

א. אין לבצע בדיקה זו אם החולה היה חרש דו־צדדית לפני המאורע או אם סובל מחבלה בסביבת האזניים דו־צדדית. במקרים אלו לא ניתן לקבוע מוות של גזע המוח באמצעות ABR. ולכן אין להתייחס אל החולה כמת. כאמור להלן פסקה יא.

ב. יש לבדוק את האזניים של החולה ולוודא שהן נקיות ופנויות משעוה, מדלקת ומ־debris.

ג. יש לתת גירוי קול בתנאים אופטימליים לאפשר קבלת תגובה – דהיינו בקצב 10 לשניה ובעוצמה מירבית.

ד. יש לבצע 4 בדיקות חוזרות ולזהות (או לא לזהות) בצורה עקבית את אותם הגלים (או העדרם).

ה. אם נחוץ למנוע הפרעות חשמליות, יש להפסיק למשך הבדיקה חימום חשמלי ואולי אף פעולת מכשיר ניתור א.ק.ג. אם הם גורמים להפרעות.

ו. יש לוודא שאין ארטיפקט של מוליכות או השראה חשמלית מהאוזניה, על ידי חסימת הקול הבוקע מהאוזניה עם משטח מתאים.

ז. יש לחזור על הבדיקה באותם התנאים כעבור לפחות 12 שעות.

ח. רק נוכחות בלעדית של הגל הראשון (מעצב השמע) תיחשב כעדות למות גזע המוח**

ט. אם אין אפילו גל ראשון, יש לנסות לקבלו על ידי רישום עם אלקטרודה מתאימה מהפרומונטוריום (Promontorium) אחרי ניקור עור התוף.

י. אם עדיין לא מתקבלת שום תגובה, יש לבדוק את תקינות המכשיר על ידי רישום מאדם נורמלי בקרבת מקום לחולה.

יא. אם, לאחר כל המאמצים, נתקבלה בדיקת ABR עם נוכחות גל ראשון בלבד, מהווה הדבר הוכחה למות גזע המוח, ואז ניתן לעבור לסעיף 5.

לא נתקבל גל ראשון, או שנתקבלו גם גלים נוספים, לא יוגדר החולה כמת עד להופעת דום לב [או מבחנים אחרים אם יאושרו בעתיד, כגון פוטנציאלים מעוררים מהמסילה לתחושה בעור (somato-sensory evoked potential)**].

5. הליך קביעת מוות מוחי

5.1*** אבחנת מוות מוחי תיקבע ע"י צוות של ארבעה אנשים, מתוכם שלושה רופאים בעלי תואר מומחה במקצועם והרביעי כונן מתוך רשימת המורשים לכך ע"י משרד הבריאות ע"פ החלטת מועצת הרבנות הראשית, אשר יכונס ע"י:
מנהל בית החולים – בשעות העבודה
או ע"י
כונן־על רפואי – אחרי שעות העבודה.

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* *סעיף זה נוסף לנוהל המקורי של הדסה על פי החלטת מועצת הרבנות הראשית לפי נוסחת מס' 2 שנכתב ע"י פרופ' ת. סומר מביה"ס לרפואה של האוניברסיטה העברית והדסה, ירושלים.*

** Chiappa, K.H. and Ropper, A.H. Evoked Potentials in Clinical Medicine. N.E.J. Med. 306:1141–1150, 1982.

*** *הקטעים המודגשים הותאמו או נוספו לנוהל המקורי של הדסה ע"י מועצת הרבנות הראשית מיום א' בסיוון תשמ"ו (3.11.86).*

5.1.2 A waiting period of at least 3 hours after having completed the three steps.

5.2 After a request has been submitted, the team of four shall be convened.

5.3 The team of physicians will convene simultaneously and will independently supervise the execution of all three steps as detailed in Section 4 of this protocol.

5.4 The determination of brain death must be unanimous. If there is a divergence of opinion, then brain death cannot be established and one must wait until a second meeting of the committee as detailed in Section 5 of this protocol.

5.5 If brain death is established by all the members of the committee, then the continued treatment of the body of the deceased will be in the hands of the staff of the Transplant Department according to standard procedures.

6. Composition of the Medical Team for Establishing Brain Death

Members of the team will be qualified physicians who are on duty in the following areas of specialization:

a. Neurology
b. Anesthesiology
c. Internal Medicine or Cardiology

7. Accountability

The following are accountable, each in his own area of activity: the qualified, principle physician; the senior resident on duty; the senior residents in neurology, anesthesiology, medicine, and cardiology; the Director of the Medical Center or his Assistant; and the Directors of the Departments and Medical Units responsible for the execution of this protocol.

הפניה למנהל בית החולים.בונן־העל הרפואי תיעשה ע"י הרופא המטפל, בעל תואר מומחה במקצועו, רק לאחר שהוא ביצע את הפעולות הבאות:

5.1.1 ביצוע כל שלושה השלבים הנדרשים לקביעת מוות מוחי במלואם כמפורט בסעיף 4 בנוהל זה.

5.1.2 המתנה של שלוש שעות לפחות לאחר ביצוע השלבים הנ"ל.

5.2 לאחר קבלת הפניה יכנס מנהל בית החולים (בשעות העבודה) או כונן־העל הרפואי של אותו היום (כאשר הפניה נעשית אחרי שעות העבודה) את הצוות המלא.

5.3 צוות הרופאים יתכנס בו־זמנית ויבדוק בצורה בלתי־תלויה, ביצוע מלא של כל שלושה השלבים כמפורט בסעיף 4 בנוהל זה.

וודא הצוות שכל הקריטריונים וההוראות הבתובות נתמלאו, יקבע במשותף את המוות המוחי וארבעת חברי הצוות יחתמו בגליון הרפואי.

5.4 קביעת המוות המוחי חייבת להיות פה אחד. נתגלו חילוקי דעות – לא ייקבע המוות המוחי ויש לזמתין עד לכינוס הוועדה שנית לפי התהליך המפורט בסעיף 5 בנוהל זה.

5.5 נקבע מוות מוחי ע"י כל חברי הצוות, ימשך הטיפול בגופת הנפטר ע"י סגל מחלקת ההשתלות לפי התהליכים המקובלים.

6. הרכב צוות רופאי בית החולים לקביעת המוות המוחי

חברי הצוות יהיו רופאים, בעלי תואר מומחה במקצועם, הבוננים של אותו היום, במקצועות הבאים:

א. נוירולוגיה
ב. הרדמה
ג. פנימית או קרדיולוגיה

7. אחריות

הרופא המטפל בעל תואר מומחה במקצועו, כונן־העל הרפואי, הבוננים במקצועות נוירולוגיה, הרדמה, פנימית וקרדיולוגיה, מנהל בית החולים או סגנו ומנהלי מחלקות ויחידות רפואיות אחראים לביצועו של נוהל זה, כל אחד בתחום פעילותו.

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The purpose of this protocol is to establish uniform principles for establishing brain death, the requisite composition of the medical team, criteria for establishing brain death, and accountability.

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Absolute absence of any brain stem function.

3.2 Severe Cerebral Trauma
Injury of the brain tissue following an accident or injury according to clinical criteria.

3.3 Severe Cerebral Hemorrhage
C.A.T. scan evidence of hemorrhage in the brain tissue.

3.4 Anoxic Brain Damage
Damage to the brain tissue due to even a temporary insufficiency of oxygen supply.

3.5 Coma
State devoid of wakefulness in which the patient is unresponsive and cannot be wakened. A comatose patient does not open his eyes, does not communicate, does not hear instructions, and does not move his extremities in response to pain stimulus (except spinal reflex).

4. Criteria for Establishing Brain Death

General

Diagnosis of brain death is to be based on the following three essential steps:
Step I: Presence of prior conditions.
Step II: Identification of misleading conditions which might confuse test results.
Step III: Essential tests which establish brain death.

4.1 Step I: Presence of Prior Conditions

4.1.1 A state of coma and the absence of spontaneous respiration (the patient is ventilated by a mechanical respirator).

4.1.2 Clear evidence of irreversible damage of known etiology to the structure of brain tissue.

4.1.3 If irreversible damage to the structure of brain tissue is found, it must be confirmed for a specific, minimum period of time. During that minimum period of time, one may not proceed to further steps of this protocol and the patient must receive every possible and reasonable treatment.

2. מטרה

מטרת נוהל זה לקבוע כללים אחידים לקביעת מוות מוחי תוך פירוט הליך קביעת המוות. הרכב צוות הרופאים. קריטריונים לקביעת מוות מוחי ואחריות לביצוע.

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הערך מוחלט של תיפקוד גזע המוח.

3.2 *חבלה מוחית קשה*
פציעה של רקמת המוח עקב תאונה או חבלה לפי קריטריונים קליניים.

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3.4 *נזק מוחי אנוקסי*
נזק לרקמת המוח, בעקבות הערך אספקת חמצן, אפילו באופן זמני.

3.5 *חוסר הכרה עמוק*
מצב של חוסר עירנות, ללא תגובות שממנו לא ניתן להעיר את הנבדק. נבדק כזה אינו פוקח עיניים, אינו יוצר קשר, אינו נשמע לפקודות ואינו מזיז גפיים לגירוי כאב (פרט לרפלקס ספינאלי).

4. קריטריונים לקביעת מוות מוחי

כללי
אבחנת מוות מוחי תתבסס על שלושה שלבים הברחיים המפורטים להלן:
שלב א' – *קיום תנאים מוקדמים.*
שלב ב' – זיהוי מצבים העלולים להטעות בקביעת המוות.
שלב ג' – מבחנים הכרחיים לקביעת מוות מוחי.
פירוט שלושת השלבים ראה בסעיפים 4.1 – 4.3.

4.1 שלב א' – קיום תנאים מוקדמים

4.1.1 מצב של *חוסר הכרה עמוק והעדר נשימה עצמונית* (חולה מחובר למכשיר הנשמה).

4.1.2 קיימת עדות ברורה לנזק במבנה רקמות המוח, *שאינו ניתן לטיפול* וקיימת אטיולוגיה מאובחנת לנזק זה.

4.1.3 נמצא נזק במבנה רקמת המוח שאינו ניתן לטיפול, יש לוודאו במשך זמן מזערי קצוב, הכל בהתאם לאבחנה. במשך הזמן הקצוב תעובב ההתקדמות לשלבים הבאים ויינתנו כל הטיפולים הסבירים האפשריים.

4.1.4 להלן משך הזמן המזערי הקצוב בו תעוכב ההתקדמות לשלבים הבאים, לפי אבחנה:

אבחנה	*משך זמן מזערי קצוב*
חבלה מוחית קשה	12 שעות
דמם תוך מוחי קשה	12 שעות
נזק מוחי אנוקסי לאחר דום לב, או תאונת הדרמה או חנק או טביעה	24 שעות

1. General

This protocol is an application of the decisions of the administration of Hadassah Medical Center and the Medical Committee regarding procedures for establishing brain death. Diagnosis of brain death is based on three essential steps. Complete compliance on the part of the medical team with these three steps, as detailed in this protocol, can establish brain death.

2. Purpose

The purpose of this protocol is to establish uniform principles for establishing brain death, the requisite composition of the medical team, criteria for establishing brain death, and accountability.

3. Definitions

3.1 Brain Death
Absolute absence of any brain stem function.

3.2 Severe Cerebral Trauma
Injury of the brain tissue following an accident or injury according to clinical criteria.

3.3 Severe Cerebral Hemorrhage
C.A.T. scan evidence of hemorrhage in the brain tissue.

3.4 Anoxic Brain Damage
Damage to the brain tissue due to even a temporary insufficiency of oxygen supply.

3.5 Coma
State devoid of wakefulness in which the patient is unresponsive and cannot be wakened. A comatose patient does not open his eyes, does not communicate, does not hear instructions, and does not move his extremities in response to pain stimulus (except spinal reflex).

4. Criteria for Establishing Brain Death

General

Diagnosis of brain death is to be based on the following three essential steps:
Step I: Presence of prior conditions.
Step II: Identification of misleading conditions which might confuse test results.
Step III: Essential tests which establish brain death.

4.1 Step I: Presence of Prior Conditions

4.1.1 A state of coma and the absence of spontaneous respiration (the patient is ventilated by a mechanical respirator).

4.1.2 Clear evidence of irreversible damage of known etiology to the structure of brain tissue.

4.1.3 If irreversible damage to the structure of brain tissue is found, it must be confirmed for a specific, minimum period of time. During that minimum period of time, one may not proceed to further steps of this protocol and the patient must receive every possible and reasonable treatment.

2. מטרה

מטרת נוהל זה לקבוע כללים אחידים לקביעת מוות מוחי תוך פירוט הליך קביעת המוות, הרכב צוות הרופאים, קריטריונים לקביעת מוות מוחי ואחריות לביצוע.

3. הגדרות

3.1 *מוות מוחי*
העדר מוחלט של תיפקוד גזע המוח.

3.2 *חבלה מוחית קשה*
פציעה של רקמת המוח עקב תאונה או חבלה לפי קריטריונים קליניים.

3.3 *דמם תוך מוחי קשה*
עדות באמצעות סריקה ממוחשבת של המוח (C.T.) להימצאות שטף דם ברקמת המוח.

3.4 *נזק מוחי אנוקסי*
נזק לרקמת המוח, בעקבות העדר אספקת חמצן, אפילו באופן זמני.

3.5 *תוסר הכרה עמוק*
מצב של תוסר עירנות, ללא תגובות שממנו לא ניתן להעיר את הנבדק. נבדק כזה אינו פוקח עיניים, אינו יוצר קשר, אינו נשמע לפקודות ואינו מזיז גפיים לגירוי כאב (פרט לרפלקס ספינאלי).

4. קריטריונים לקביעת מוות מוחי

כללי
אבחנת מוות מוחי תתבסס על שלושה שלבים הכרחיים המפורטים להלן:
שלב א' – *קיום תנאים מוקדמים.*
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פירוט שלושת השלבים ראה בסעיפים 4.1 – 4.3.

4.1 שלב א' – קיום תנאים מוקדמים

4.1.1 מצב של *תוסר הכרה עמוק והעדר נשימה עצמונית* (חולה מחובר למכשיר הנשמה).

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2. מטרה

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3. הגדרות

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3.2 *חבלה מוחית קשה*
פציעה של רקמת המוח עקב תאונה או חבלה לפי קריטריונים קליניים.

3.3 *דמם תוך מוחי קשה*
עדות באמצעות סריקה ממוחשבת של המוח (C.T.) להימצאות שטף דם ברקמת המוח.

3.4 *נזק מוחי אנוקסי*
נזק לרקמת המוח, בעקבות הערך אספקת חמצן, אפילו באופן זמני.

3.5 *חוסר הכרה עמוק*
מצב של חוסר עירנות, ללא תגובות שממנו לא ניתן להעיר את הנבדק, נבדק כזה אינו פוקח עיניים, אינו יוצר קשר, אינו נשמע לפקודות ואינו מזיז גפיים לגירוי כאב (פרט לרפלקס ספינאלי).

4. קריטריונים לקביעת מוות מוחי

כללי
אבחנת מוות מוחי תתבסס על שלושה שלבים הכרחיים המפורטים להלן:
שלב א' – *קיום תנאים מוקדמים.*
שלב ב' – זיהוי מצבים העלולים להטעות בקביעת המוות.
שלב ג' – מבחנים הברחיים לקביעת מוות מוחי.
פירוט שלושת השלבים ראה בסעיפים 4.1 – 4.3.

4.1 שלב א' – קיום תנאים מוקדמים

4.1.1 מצב של *חוסר הכרה עמוק והעדר נשימה עצמונית* (חולה מחובר למכשיר הנשמה).

4.1.2 קיימת עדות ברורה לנזק במבנה רקמות המוח, *שאינו ניתן לטיפול* וקיימת אטיולוגיה מאובחנת לנזק זה.

4.1.3 נמצא נזק במבנה רקמת המוח שאינו ניתן לטיפול, יש לוודאו במשך זמן מזערי קצוב, הכל בהתאם לאבחנה. במשך הזמן הקצוב תעוכב ההתקדמות לשלבים הבאים ויינתנו כל הטיפולים הסבירים האפשריים.

4.1.4 להלן משך הזמן המזערי הקצוב בו תעוכב ההתקדמות לשלבים הבאים, לפי אבחנה:

אבחנה	*משך זמן מזערי קצוב*
חבלה מוחית קשה	12 שעות
דמם תוך מוחי קשה	12 שעות
נזק מוחי אנוקסי לאחר דום לב, או תאונת הדרדמה או חנק או טביעה	24 שעות

5.1.2 A waiting period of at least 3 hours after having completed the three steps.

5.2 After a request has been submitted, the team of four shall be convened.

5.3 The team of physicians will convene simultaneously and will independently supervise the execution of all three steps as detailed in Section 4 of this protocol.

5.4 The determination of brain death must be unanimous. If there is a divergence of opinion, then brain death cannot be established and one must wait until a second meeting of the committee as detailed in Section 5 of this protocol.

5.5 If brain death is established by all the members of the committee, then the continued treatment of the body of the deceased will be in the hands of the staff of the Transplant Department according to standard procedures.

6. Composition of the Medical Team for Establishing Brain Death

Members of the team will be qualified physicians who are on duty in the following areas of specialization:

a. Neurology
b. Anesthesiology
c. Internal Medicine or Cardiology

7. Accountability

The following are accountable, each in his own area of activity: the qualified, principle physician; the senior resident on duty; the senior residents in neurology, anesthesiology, medicine, and cardiology; the Director of the Medical Center or his Assistant; and the Directors of the Departments and Medical Units responsible for the execution of this protocol.

הפניה למנהל בית החולים.בונן־העל הרפואי תיעשה ע"י הרופא המטפל, בעל תואר מומחה במקצועו, רק לאחר שהוא ביצע את הפעולות הבאות:

5.1.1 ביצוע כל שלושה השלבים הנדרשים לקביעת מוות מוחי במלואם כמפורט בסעיף 4 בנוהל זה.

5.1.2 המתנה של שלוש שעות לפחות לאחר ביצוע השלבים הנ"ל.

5.2 לאחר קבלת הפניה יכנס מנהל בית החולים (בשעות העבודה) או כונן־העל הרפואי של אותו היום (כאשר הפניה נעשית אחרי שעות העבודה) את הצוות המלא.

5.3 צוות הרופאים יתכנס בו־זמנית ויבדוק בצורה בלתי־תלויה, ביצוע מלא של כל שלושה השלבים כמפורט בסעיף 4 בנוהל זה.

וודא הצוות שכל הקריטריונים וההוראות הבתובות נתמלאו, יקבע במשותף את המוות המוחי וארבעת חברי הצוות יחתמו בגליון הרפואי.

5.4 קביעת המוות המוחי חייבת להיות פה אחד. נתגלו חילוקי דעות – לא ייקבע המוות המוחי ויש להמתין עד לבינוס הוועדה שנית לפי התהליך המפורט בסעיף 5 בנוהל זה.

5.5 נקבע מוות מוחי ע"י כל חברי הצוות, יימשך הטיפול בגופת הנפטר ע"י סגל מחלקת ההשתלות לפי התהליכים המקובלים.

6. הרכב צוות רופאי בית החולים לקביעת המוות המוחי

חברי הצוות יהיו רופאים, בעלי תואר מומחה במקצועם, הבוגנים של אותו היום, במקצועות הבאים:

א. נוירולוגיה
ב. הרדמה
ג. פנימית או קרדיולוגיה

7. אחריות

הרופא המטפל בעל תואר מומחה במקצועו, כונן־העל הרפואי, הבוננים במקצועות נוירולוגיה, הרדמה, פנימית וקרדיולוגיה, מנהל בית החולים או סגנו ומנהלי מחלקות ויחידות רפואיות אחראים לביצועו של נוהל זה, כל אחד בתחום פעילותו.

5.1.2 A waiting period of at least 3 hours after having completed the three steps.

5.2 After a request has been submitted, the team of four shall be convened.

5.3 The team of physicians will convene simultaneously and will independently supervise the execution of all three steps as detailed in Section 4 of this protocol.

5.4 The determination of brain death must be unanimous. If there is a divergence of opinion, then brain death cannot be established and one must wait until a second meeting of the committee as detailed in Section 5 of this protocol.

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6. Composition of the Medical Team for Establishing Brain Death

Members of the team will be qualified physicians who are on duty in the following areas of specialization:

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The following are accountable, each in his own area of activity: the qualified, principle physician; the senior resident on duty; the senior residents in neurology, anesthesiology, medicine, and cardiology; the Director of the Medical Center or his Assistant; and the Directors of the Departments and Medical Units responsible for the execution of this protocol.

הפניה למנהל בית החולים.כונן־העל הרפואי תיעשה ע"י הרופא המטפל, בעל תואר מומחה במקצועו, רק לאחר שהוא ביצע את הפעולות הבאות:

5.1.1 ביצוע כל שלושה השלבים הנדרשים לקביעת מוות מוחי במלואם כמפורט בסעיף 4 בנוהל זה.

5.1.2 המתנה של שלוש שעות לפחות לאחר ביצוע השלבים הנ"ל.

5.2 לאחר קבלת הפניה יכנס מנהל בית החולים (בשעות העבודה) או כונן־העל הרפואי של אותו היום (כאשר הפניה נעשית אחרי שעות העבודה) את הצוות המלא.

5.3 צוות הרופאים יתכנס בו־זמנית ויבדוק בצורה בלתי־תלויה, ביצוע מלא של כל שלושה השלבים כמפורט בסעיף 4 בנוהל זה.

ודא הצוות שכל הקריטריונים וההוראות הבתובות נתמלאו, יקבע במשותף את המוות המוחי וארבעת חברי הצוות יחתמו בגליון הרפואי.

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חברי הצוות יהיו רופאים, בעלי תואר מומחה במקצועם, הבוננים של אותו היום, במקצועות הבאים:

א. נוירולוגיה
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הרופא המטפל בעל תואר מומחה במקצועו, כונן־העל הרפואי, הבוננים במקצועות נוירולוגיה, הרדמה, פנימית וקרדיולוגיה, מנהל בית החולים או סגנו ומנהלי מחלקות ויחידות רפואיות אחראים לביצועו של נוהל זה, כל אחד בתחום פעילותו.

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