

Ethics of Living Donor Transplantation



Giuliano Testa, MD, FACS, MBA
Fellow, MacLean Center for Medical Clinical Ethics
Surgical Director, Living Donor Liver Program, Simmons Transplant Institute

Ethical Issues in Health Care

- **Autonomy** - Requires that the patient have autonomy of thought, intention, and action when making decisions regarding health care procedures. Therefore, the decision-making process must be free of coercion or coaxing. In order for a patient to make a fully informed decision, she/he must understand all risks and benefits of the procedure and the likelihood of success.
- **Justice** - The idea that the burdens and benefits of new or experimental treatments must be distributed equally among all groups in society. Requires that procedures uphold the spirit of existing laws and are **fair to all players involved**. The health care provider must consider four main areas when evaluating justice: **fair distribution of scarce resources, competing needs**, rights and obligations, and potential conflicts with established legislation.
- **Beneficence** - Requires that the procedure be provided with the **intent of doing good** for the patient involved. Demands that **health care providers develop and maintain skills and knowledge, continually update training, consider individual circumstances of all patients, and strive for net benefit**.
- **Non-maleficence** - Requires that a **procedure does not harm the patient involved** or others in society. In some cases, it is difficult for doctors to successfully apply the do no harm principle.

Ethical Issues in Transplantation

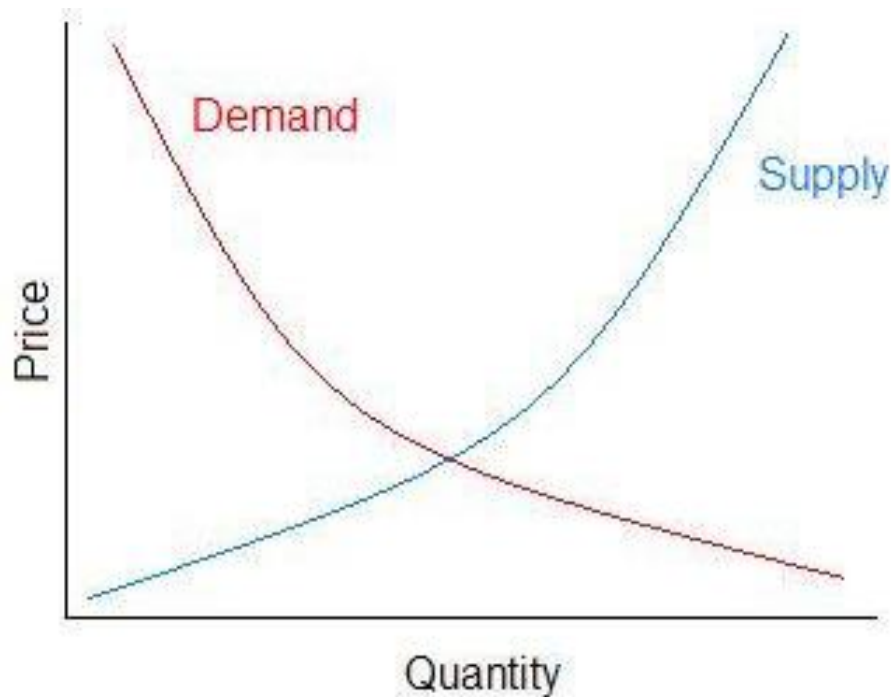
- Supply-Demand
- Inequalities/Allocation (social barrier, financial barrier, regional barrier)
- Personal vs Common Good
- Informed consent (organ quality)
- General information about Living Donor Transplant

Ethics of Living Donor Transplantation

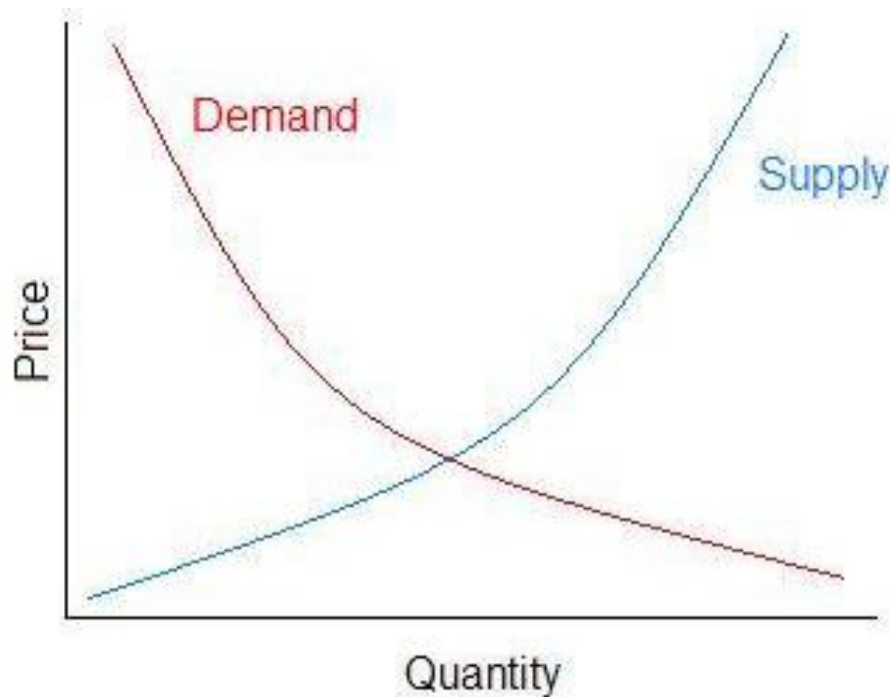
- General Principles
- Ethics in Deceased Donor Transplantation
- Ethics in Living Donor Transplantation
- Conclusions

Why so much interest?

- Almost all issues about transplantation relate to a Supply/Demand Law and its consequences



Why so much interest?

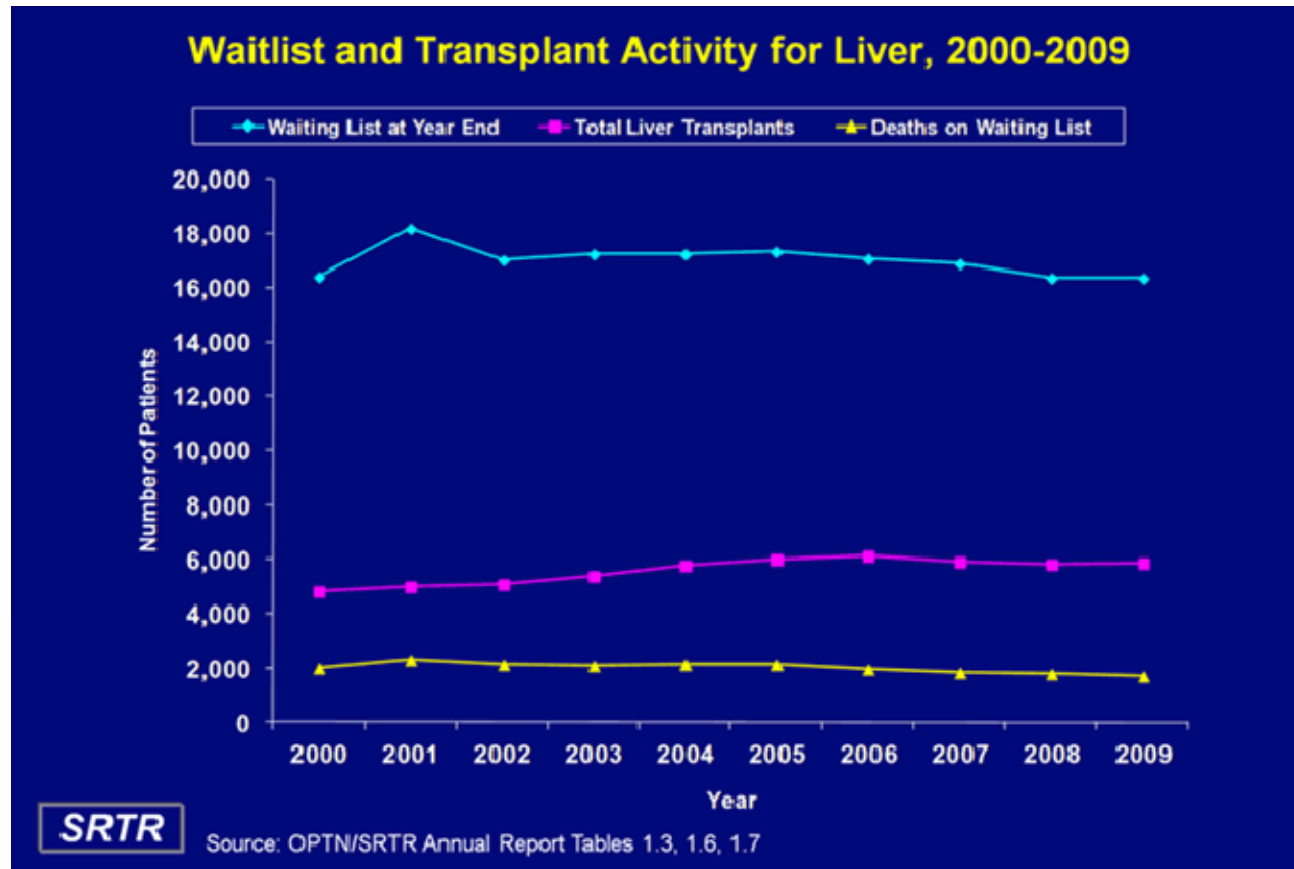


The smaller the Supply the Greater:

- Ethical Debate
- Public Interest
- Financial Impact
- Proposed Solutions
- Patient Suffering

- It is agreed upon that transplant is the accepted treatment for end-stage organ failure.
- It is a fact that there are not enough organs (and the number of available deceased organs is not growing).

Supply-Demand



Supply-Demand

- 22% of patients listed as Status 1 die without a LTX.
- 45% of the patients with MELD >30 die without a LTX.
- 10% of patients with MELD 21-30 die without a LTX.

The supply is insufficient to cover even the patients who are most in need of a LTX.

Inequalities

- There are inequalities based on where the patient lives.
- MELD was supposed to favor sicker patient access to LTX but - less sick patients in one OPO can supersede sicker patients in another OPO even within the same region.
- Social and financial issues prevail over clinical needs in many cases.

Personal/Common Good

- Aggressive transplantation may benefit a patient or a transplant center at large but may also harm other patients waiting for an organ.
- There is ethical tension between caring for “my” patient and using a common good (deceased donors) that becomes stronger when: re-transplant, marginal outcome, history of dependence, multi-visceral transplants, etc.

Personal/Common Good

- In a situation of organ shortage, indications with expected poor outcomes are excluded.
- Exclusion is justified in the name of “public good.”
- Public good = balance between utility and justice.
- This concept creates tension in the physician responsible for the care of the “individual” patient.
- It is possible that in a situation of oversupply indication would be liberalized.

Informed Consent

- Transplant outcomes are dictated also by organ quality. Patients should be informed about the quality of the organ they are about to receive.
- How much information can a patient really understand and retain and how good of an informed consent can a patient give when the organ he is offered is “as good as it gets”?

Informed Consent

- Use of so-called “marginal” or “expanded donor” kidneys has increased the available donor pool, but only modestly, and it could be argued that many of these kidneys fail earlier than living-donor or standard deceased-donor kidneys, thereby increasing the number of people returning to the wait list and reducing the long-term overall beneficial effect.
- My impression is that we have lowered the bar in a dangerous way in the selection of kidney donors, both deceased and living.

AP Monaco Reward for organ donation the time has come *Kidney International (2006) 69*

Ethical Issues about LD

- Double Equipoise
- Autonomy vs Paternalism
- Common Good vs Personal Good
- Informed Consent

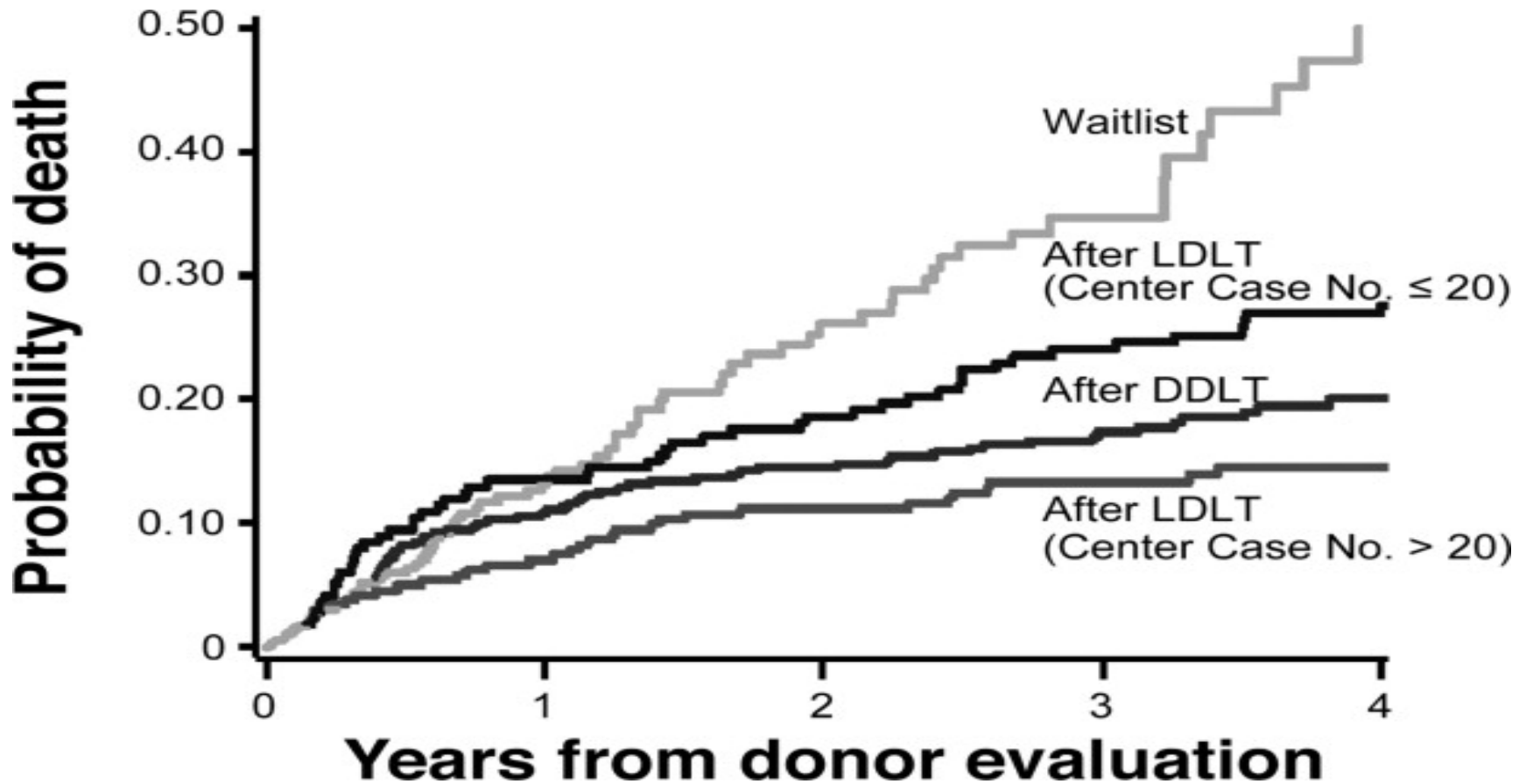
Equipoise

- The case of Deceased and Living Donor Transplantation
- 1989 Mark Siegler et al. accepted Living Donor Liver Transplantation under the “Equipoise” premise and expanded to the concept of “Double Equipoise”

Equipoise

- Equipoise for donor and recipient
- Equipoise: initial balance between risks and benefits in the 2 study groups. Conventionally applies to the patient in the study trial.
- In living donor liver transplant we have a “Double equipoise.” It reflects the balance between potential risks and benefits for BOTH: donor and recipient.

Outcome



In fact, the magnitude of mortality reduction was among the largest observed with any form of transplant intervention

Response to Outcome

Table I-4. Unadjusted 1- and 5-Year Patient Survival by Organ

Organ Transplanted	1-Year Survival (Txp 2006-2007)	5-Year Survival (Txp 2002-2007)
Kidney		
Deceased donor	95.6%	81.9%
Living donor	98.5%	91.0%
Pancreas alone	97.8%	88.7%
Pancreas after kidney	97.0%	84.5%
Kidney-pancreas	95.7%	87.2%
Liver		
Deceased donor	88.4%	73.8%
Living donor	91.0%	79.0%
Intestine	89.3%	57.9%
Heart	88.3%	74.9%
Lung	83.3%	54.4%
Heart-lung	80.6%	44.9%
Kidney-liver	87.4%	71.4%
Kidney-heart	95.8%	77.6%
Liver-intestine	63.3%	58.0%

SRTR

Source: 2009 OPTN/SRTR Annual Report, Table 1.13.

Response to Outcome

Table I-5. Unadjusted 1- and 5-Year Graft Survival by Organ

Organ Transplanted	1-Year Survival (Txp 2006-2007)	5-Year Survival (Txp 2002-2007)
Kidney		
Deceased donor	91.0%	69.3%
Living donor	96.3%	81.4%
Pancreas alone	75.5%	51.5%
Pancreas after kidney	80.0%	53.4%
Kidney-pancreas (kidney)	92.5%	78.6%
Kidney-pancreas (pancreas)	84.8%	73.4%
Liver		
Deceased donor	84.3%	68.4%
Living donor	86.0%	72.9%
Intestine	78.9%	39.6%
Heart	87.9%	73.7%
Lung	81.6%	51.5%
Heart-lung	80.5%	43.1%
Kidney-liver (kidney)	83.0%	64.4%
Kidney-liver (liver)	83.7%	66.0%
Kidney-heart (heart)	92.6%	76.0%
Kidney-heart (kidney)	88.2%	72.0%
Liver-intestine (intestine)	58.7%	53.0%
Liver-intestine (liver)	58.7%	53.4%

SRTR

Source: 2009 OPTN/SRTR Annual Report, Table 1.13.

Equipoise

- If the new treatment is superior to the old one how do we interpret “Equipoise”?
- Should we not support and promote the new one instead of the old one?

Questions to be asked:

- Are transplantation outcomes with living donor grafts superior to deceased?
- Are donors harmed/maimed in the process of donation?

- Is there an “amount of risk” that will make living donation acceptable?
- It seems to me that is where we are today, otherwise we (the doctors) or somebody else (the Government) would have already stopped Living Donation.

- Consider that what we state as unacceptable complications are perfectly acceptable by the donor when the alternative is recipient death. Discarding this concept means trading a potential complication for certain death.

- If any amount of risk is too high: Living donation must be abandoned.
- What are the consequences of abandoning Living Donation?
- ~28,000 less transplants and ~28,000 more patients on the transplant list.
- If a certain amount of risk is acceptable then Living Donation should continue to be performed.

Autonomy vs Paternalism

- To be autonomous is to be one's own person, to be directed by considerations, desires, conditions, and characteristics that are not simply imposed externally upon one, but are part of what can somehow be considered one's authentic self.
- Autonomy is the aspect of persons that undue paternalism offends against.

Autonomy vs Paternalism

- The promotion of autonomy in moral choice can be contrasted with the effects of a paternalistic approach to medicine, which often amounts to ‘a rather arrogant assumption that one knows best’ on the part of doctors.
- The problem of paternalism is often expressed in terms of a conflict between the principles of autonomy and beneficence because paternalistic doctors may intend to act in the patient’s best interests without fully considering how their evaluation of those best interests may be modified by a fuller understanding of the patient’s views.

Rachel Warren Paternalism in Medical Ethics: A Critique

Autonomy vs Paternalism

- We, doctors at large, measure success according to “medical standards.”
- Prolonging life, i.e. life duration after a certain procedure, and improving quality of life may take different meanings for the patients and families involved.
- Families and patients may interpret as perfectly acceptable outcomes that by “objective (medical) standards” are viewed as unsatisfactory.

Autonomy vs Paternalism

- At the other extreme, doctors, regulatory agencies (UNOS, CMS) dictate indications and candidacy to Living Donor transplantation using “objective medical standards.”
(paternalism)

Autonomy vs Paternalism

In living donor transplant we witness a magnification of these ethical concepts.

- At one extreme all controversial and extended indications are justifiable (absolute autonomy).
- The donor does not come from a “public supply” and outcomes are measured according to family’s desire.
- At the other extreme “protection” of the donor is the fundamental concept from which all else derives (absolute paternalism).

Vancouver Forum

- LD candidates are also candidates to deceased TX
- Expectation of acceptable outcome
- UNOS accepted transplant criteria

Non-maleficence

- Non-maleficence = do no harm (the donor has no health benefits from undergoing the surgery except psychological benefits)
- Strict evaluation
- Proper informed consent: risks and benefit; incidence of complication (national/international and personal) experience of the center and surgical/medical team

Informed Consent

- Decision to donate is never really made, rather agreeing to donate is usually a leap of faith.
- The donor multistep consent process and “cooling off” period is well designed but may serve no purpose (donors hear what they want and never think a complication will occur to them).
- Almost all donors never regret their decision to donate.
- Consenting donors is not simply having them sign a piece of paper.

Crowley-Matoka M et. al American Journal of Transplantation vol 4, 2004

Informed Consent

- How to consent somebody for donation?
- Caveats: Donor quality of Life
- Increased anxiety and depression prior to donation for ALF and HCC
- 3 months after donation: significant impact of recipient outcomes on donors but mental QOL in normal range with largest improvements in ALF donors
- Spital claims that risks for the donor should be balanced with his benefits, not the recipient's: satisfaction with perceived increased self-efficacy, stress relief, and increase donor QOL

Erim Y et al. Liver Transplant vol 13, 2007

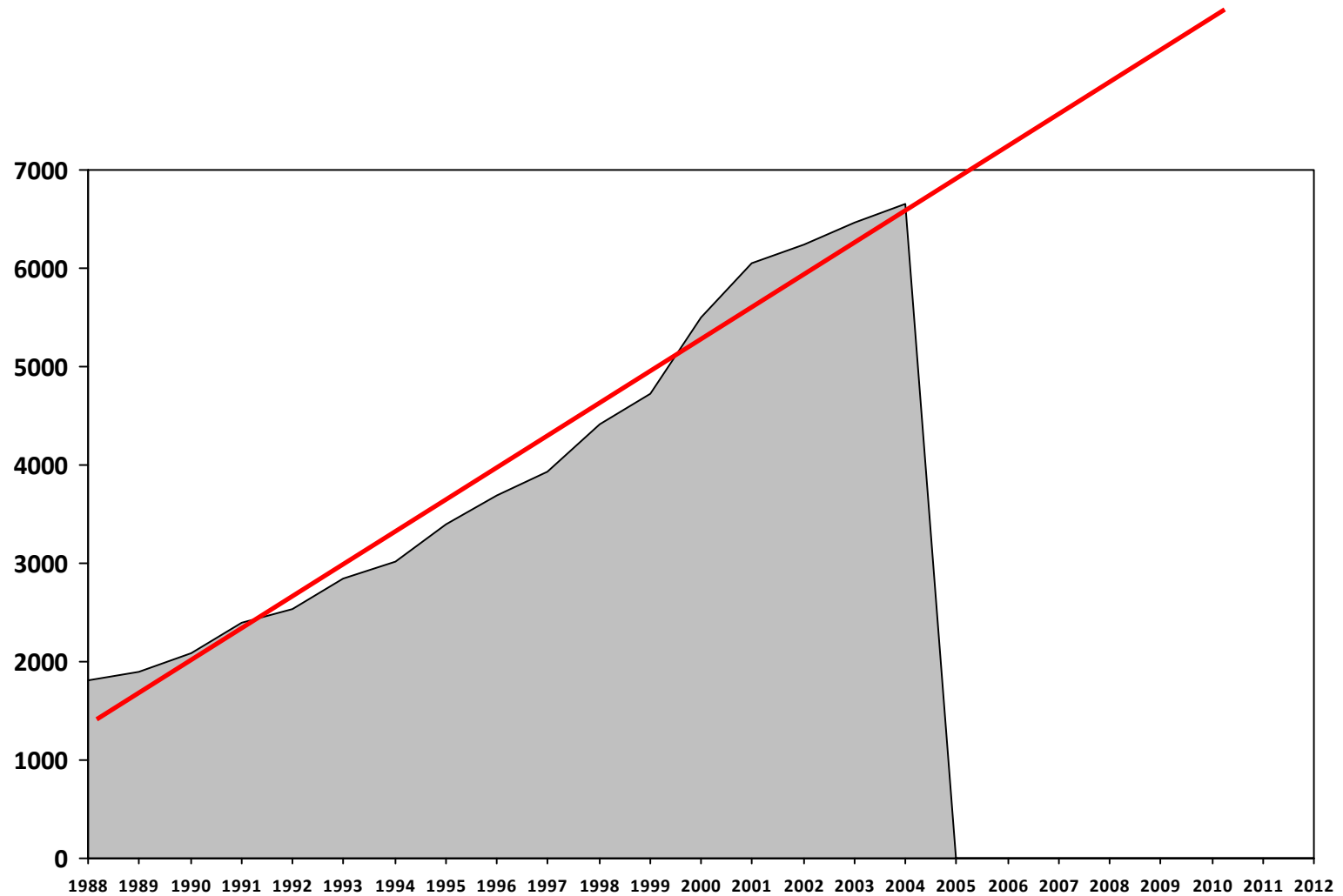
Utility

Utility in LD doing the most good for the most people: minimize pretransplant morbidity and mortality = less cost; enhancement of posttransplant outcome; increased availability for other patients on the waiting list

- Are there AT THE PRESENT TIME alternatives to Living Donation?
- Decrease significantly the number of patients on the waiting list.
- Continue to develop tools/strategies to recruit more deceased donors.
- Natural Organ Substitutes

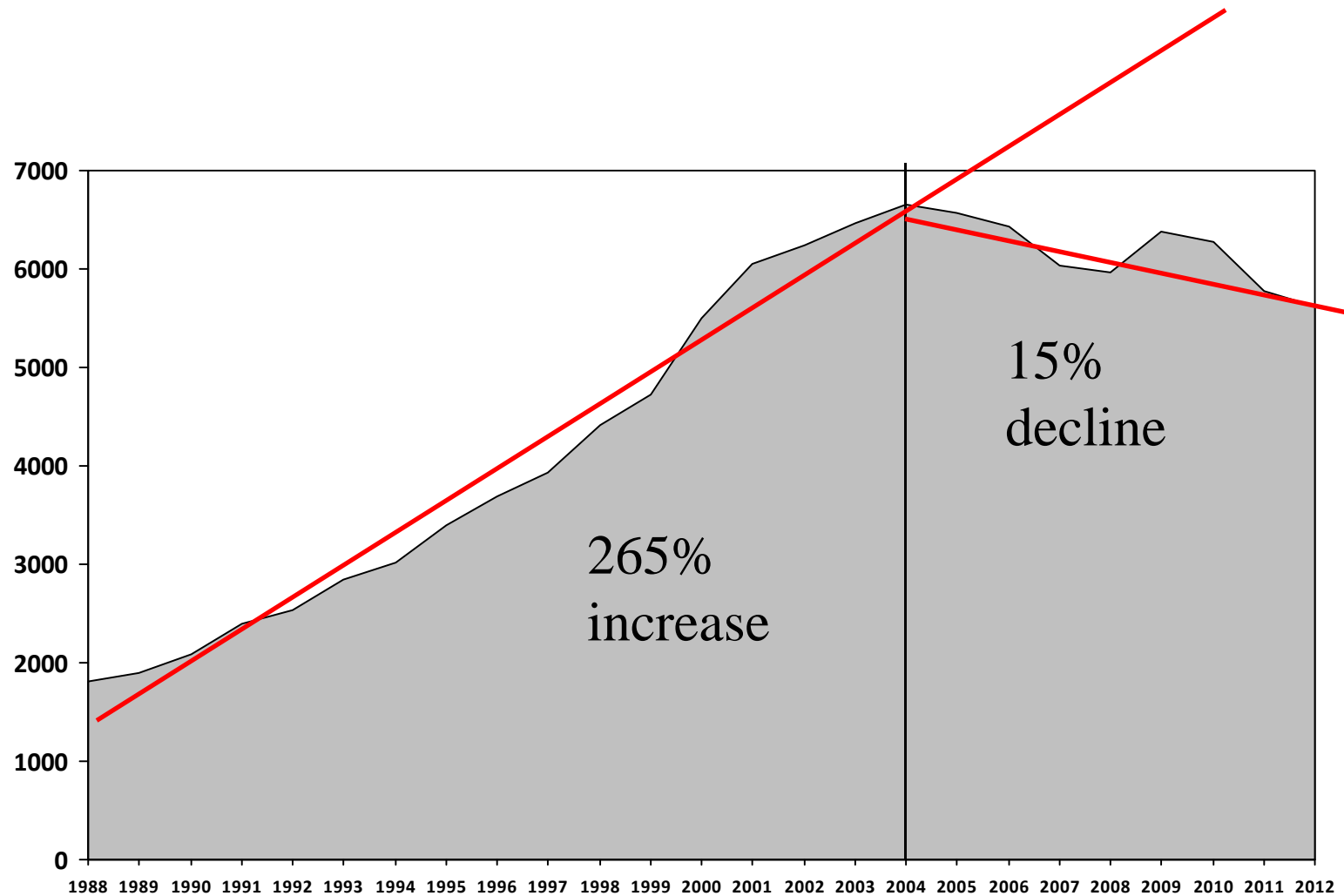
- In fact, the transplant community at large is not promoting/supporting Living Donation despite its clear benefits.
- Interestingly, there is instead a stronger push for the utilization of marginal deceased organs.
- Interestingly, transplant is the only medical practice where knowingly the recipient is “invited” to accept a lower quality treatment.

Number of living kidney donors, United States, 1988 – 2004



All data obtained from the Organ Procurement and Transplantation Network, www.optn.transplant.hrsa.gov

Number of living kidney donors, United States, 2004 – 2012



All data obtained from the Organ Procurement and Transplantation Network, www.optn.transplant.hrsa.gov

- The William Brown story, again.
- The need for the transport, its social value and the financial return made acceptable to navigate the more difficult route without the sufficient number of lifeboats. The existing alternatives were already there (different route, less passengers, more lifeboats, etc.) but were adopted only after the tragedy.

LD

- **Do we have a system in place?**
 - CMS, self regulation
- **Can LD be performed safely?**
 - Yes, given: strength of the field, adherence to regulations, donor comes first
- **Can mortality and complication rate be 0%?**
 - No. A critical review of complications and deaths is the best methodology to limit complications and deaths.
- **Have we improved since 1997?**
 - Yes: transparency, uniform regulations, NIH funded studies, experience

NOTA Act 1984

- It shall be unlawful for any person to knowingly acquire, receive, or otherwise transfer any human organ for valuable consideration for use in human transplantation if the transfer affects interstate commerce.
- Any person who violates subsection (a) of this section shall be fined not more than \$50,000 or imprisoned not more than five years, or both.
- The term "valuable consideration" does not include the reasonable payments associated with the removal, transportation, implantation, processing, preservation, quality control, and storage of a human organ or the expenses of travel, housing, and lost wages incurred by the donor of a human organ in connection with the donation of the organ.

Con Reimbursement

- Inclusion of “material gain” for organ donors
- No country that permits material gain has a robust practice of unpaid living / deceased donor transplantation
- “Material Gain” is perceived as coercive since it persuades the ones who would not donate to donate
- Difficult to verify information given by the paid donor
- Fear of supplementation of Government reimbursement with recipient incentives
- “Chilling Effect” on the international transplant scene
- Individual States with own proposal for donor rewards could lead to donors and recipients seeking best deal

G Danovitch Current opinion in Transplantation vol 14, 2009

Pro Reimbursement

- The idea that any type of gain, reward, or compensation — financial or otherwise— for organ donation is unethical and inherently undesirable does not necessarily follow. Rewards for doing good, for making self-sacrifices, for taking personal risks to help others in one's family, community, or country are evident in every fabric of modern Western society.

Pro Reimbursement

- Individuals are entitled to control of their body parts
- Legal markets at fair price (40-80K)
- Federal agency in cooperation with UNOS
- Would eradicate Transplant Tourism
- Would favor also the recipient who could not afford reimbursement

Friedman and Friedman Payment for Kidney donors Pros and Cons Kidney International (2006) 69

- “Everything in Transplantation relates to Ethics: marginal donors, heart-beating donors, patient selection that often depends on social, economic and psychological factors.”
- “And yet: if we had proceeded in a very stepwise manner, we probably would have not been even a tenth as far along in the transplant field as we are now.”

John Fung Transplant Innovation Cleveland Clinic Journal of Medicine vol 75 2008