

# Advance Medical Directive

- ❖ No allogeneic (donor) blood transfusions under any circumstances
- ❖ Renewed periodically
- ❖ Court-tested
- ❖ Emergency contact persons listed on reverse

## ADVANCE MEDICAL DIRECTIVE

1. I, \_\_\_\_\_, make this advance directive as a formal statement of my wishes. These instructions reflect my resolute and informed decision.
2. I direct that **no blood transfusions** (whole blood, red cells, white cells, platelets, or blood plasma) be given to me under any circumstances, even if deemed necessary to preserve my life or health. I accept *non-blood* expanders, *nonblood* drugs that control hemorrhage and stimulate the production of blood cells, and other *nonblood* management.
3. This directive is an exercise of my right to decide medical treatment in accord with my deeply held values and convictions. I am one of Jehovah's Witnesses, and I make this directive out of obedience to commands in the Bible, such as: "Keep abstaining . . . from blood."—Acts 15:28, 29.
4. **Regarding minor fractions of blood, my instructions are:** [initial those that apply]  
(a) \_\_\_\_\_ I REFUSE ALL (b) \_\_\_\_\_ I REFUSE ALL EXCEPT:  
\_\_\_\_\_  
\_\_\_\_\_  
(c) \_\_\_\_\_ I may be willing to accept some minor blood fractions, but the details will have to be discussed with me if I am conscious.
5. **Regarding medical procedures involving the use of my own blood:** I *refuse* to predonate and store my blood for later infusion. I *accept* diagnostic procedures such as blood testing.  
My other instructions regarding use of my blood are: [initial those that apply]  
(a) \_\_\_\_\_ I REFUSE ALL (b) \_\_\_\_\_ I REFUSE ALL EXCEPT:  
\_\_\_\_\_  
\_\_\_\_\_  
(c) \_\_\_\_\_ I may be willing to accept certain medical procedures involving my blood, but the details will have to be discussed with me if I am conscious.
6. **Additional Instructions:** [this may be left blank]  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_





“More than 250,000  
immigrants  
enter the country annually.  
Patients from more than 300  
distinct cultures present  
themselves to doctors across  
the country every day.”

*Medical Post* 1995 Nov 14;31(40):19.



“I have striven not to laugh  
at human actions, not to weep  
at them, nor to hate them, but  
to understand them.”

Spinoza, 17<sup>th</sup> century Dutch philosopher.



# Jehovah's Witnesses

- ❖ 180,000 in Canada
- ❖ More than 15 million worldwide



# Jehovah's Witnesses as Patients

‘Except for the refusal of blood transfusion,  
they are totally within the mainstream of  
modern medicine.’

Kitchens CS. Are transfusions overrated? Surgical outcome of  
Jehovah's Witnesses. *Am J Med* 1993;94(2):117-9.



# Biblical Basis for Refusal of Blood Transfusion

“But flesh with the life thereof, which is the blood thereof, shall ye not eat.”

(Genesis 9:4 *King James Version*)

“You shall not partake of the blood of any flesh for the life of all flesh is its blood.”

(Leviticus 17:12 *Tanakh Bible [Jewish]*)

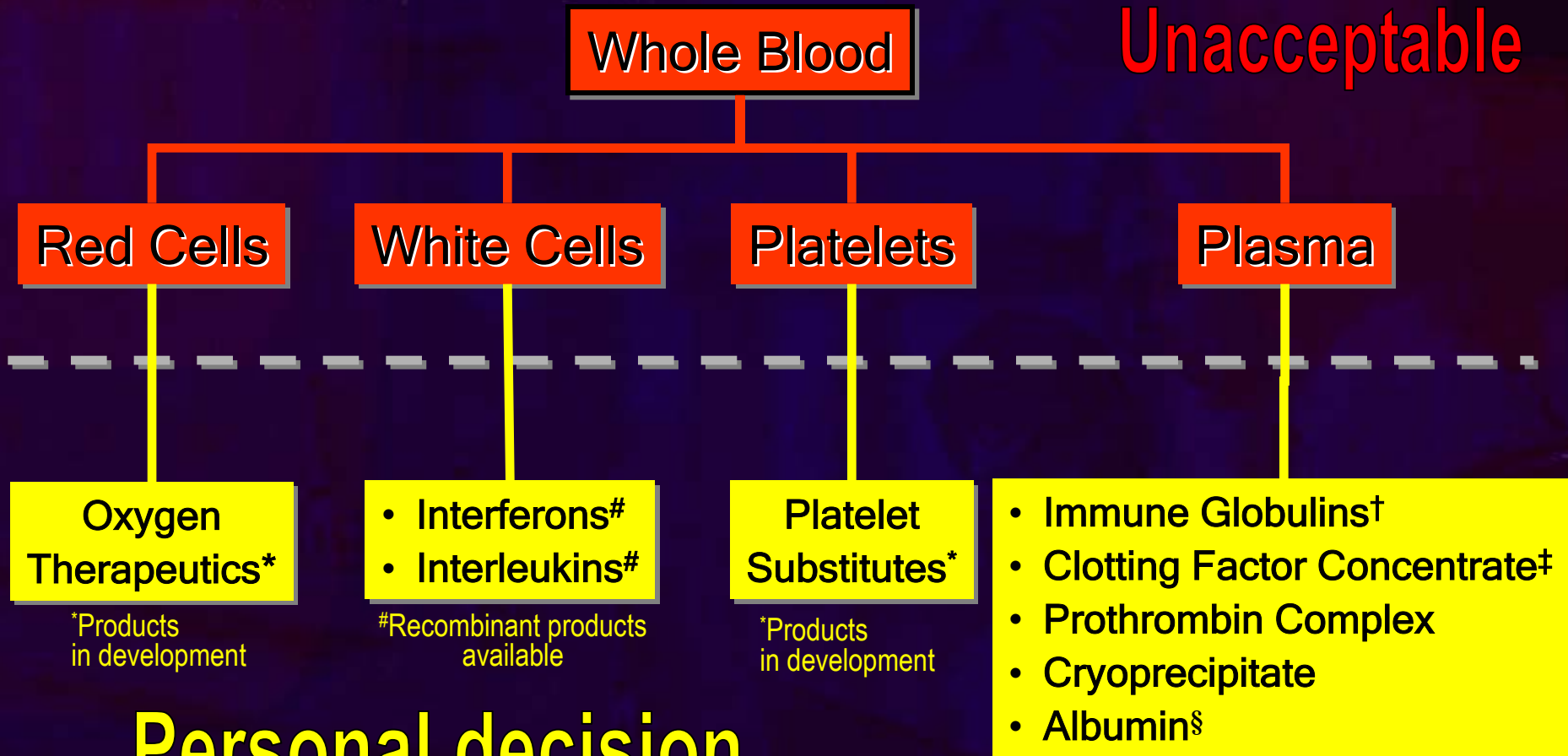
“You are to abstain...from blood.”

(Acts 15:29 *Jerusalem Bible [Catholic]*)



# Jehovah's Witnesses' Religious Position on Blood Fractions

Unacceptable



Red Cells

White Cells

Platelets

Plasma

Oxygen Therapeutics\*

\*Products in development

• Interferons#  
• Interleukins#

#Recombinant products available

Platelet Substitutes\*

\*Products in development

• Immune Globulins†  
• Clotting Factor Concentrate‡  
• Prothrombin Complex  
• Cryoprecipitate  
• Albumin§

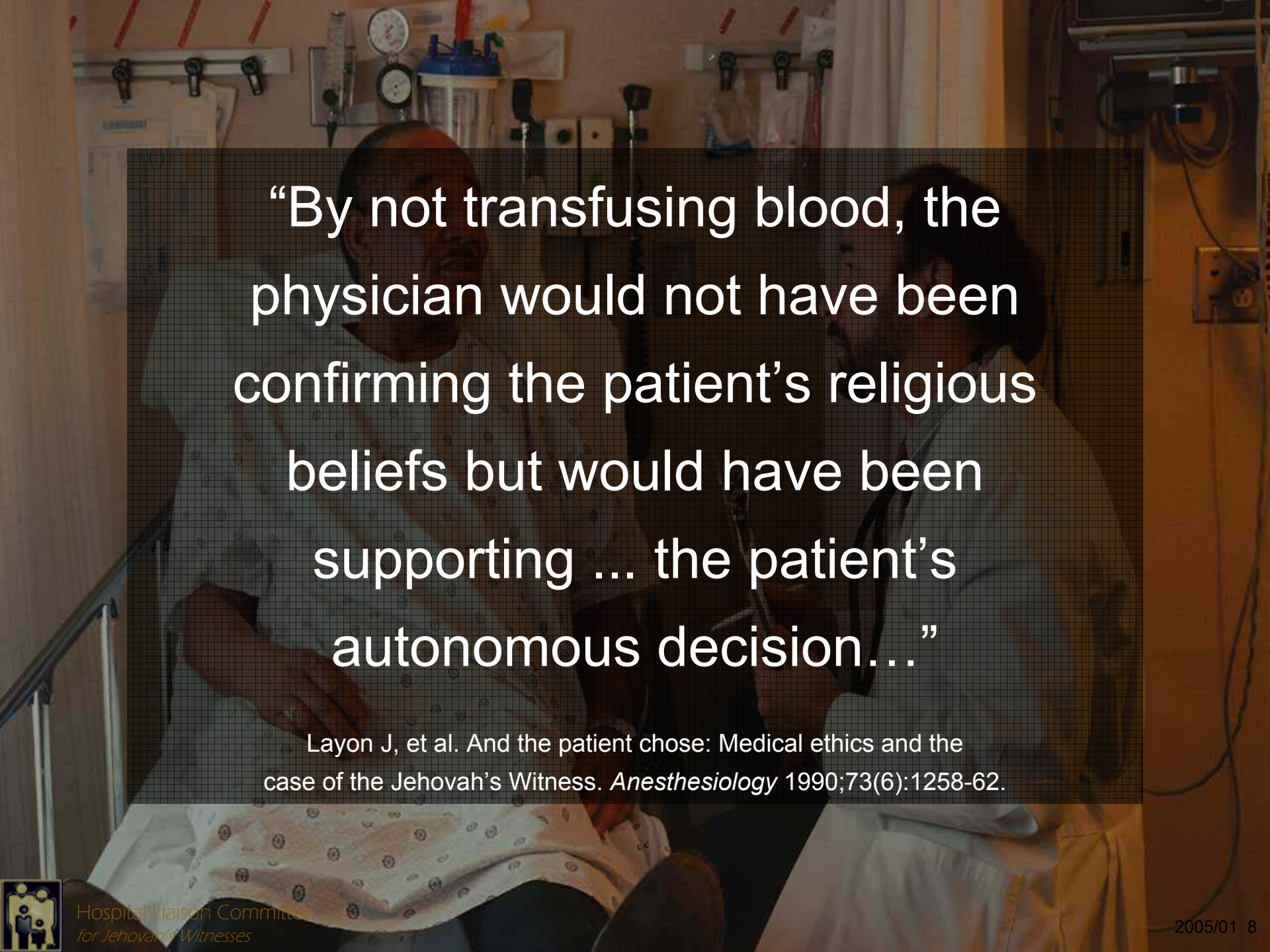
† Recombinant anti-RhD in development

‡ Recombinant Factors VIIa, VIII, IX available

§ Recombinant albumin in development

Personal decision





“By not transfusing blood, the physician would not have been confirming the patient’s religious beliefs but would have been supporting ... the patient’s autonomous decision...”

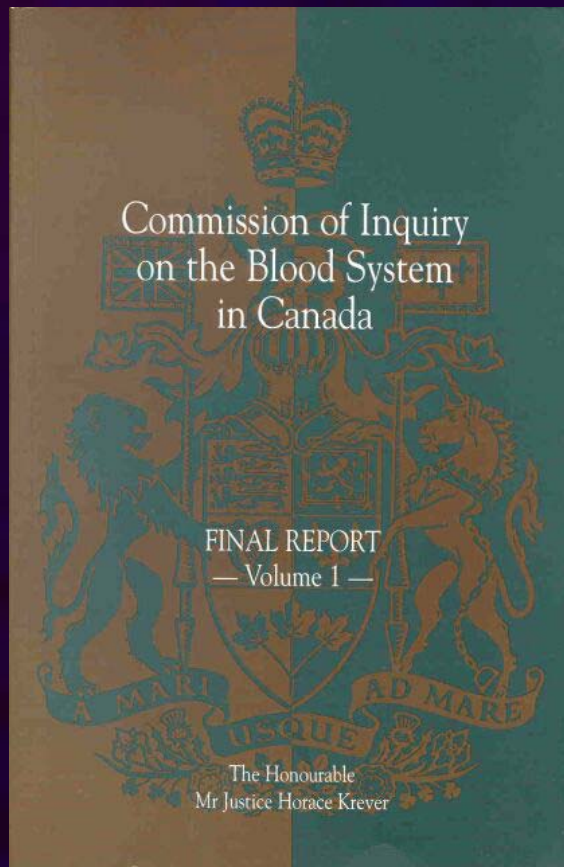
Layon J, et al. And the patient chose: Medical ethics and the case of the Jehovah’s Witness. *Anesthesiology* 1990;73(6):1258-62.



- ❖ We will all be patients
- ❖ We all value right to choose treatment



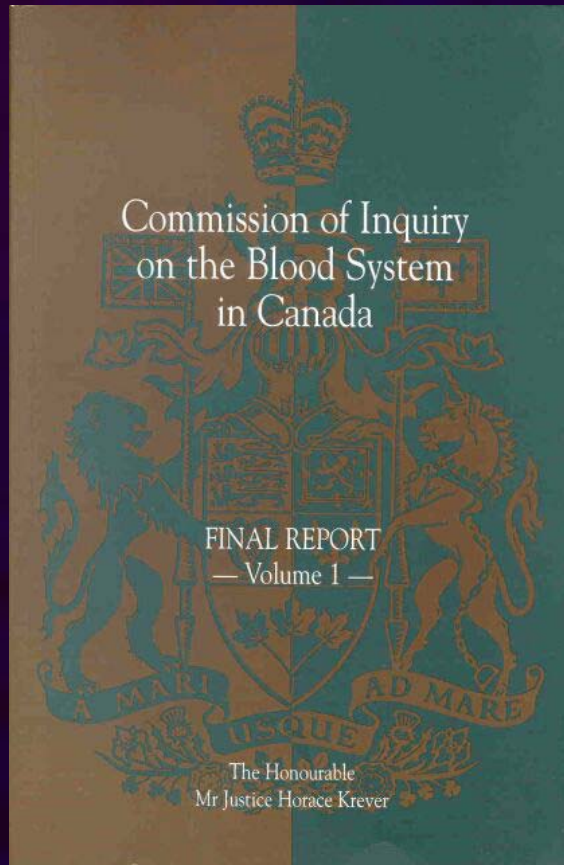
# Krever Commission Final Report



- ❖ 3 Volumes, > 1100 pages
- ❖ 244 Days of public hearings
- ❖ 353 Witnesses
- ❖ 500,000 Pages of evidence
- ❖ 50 Final Recommendations



# Krever Commission Final Report Recommendation No. 9



- ❖ “It is recommended that the operator of the blood supply system promote appropriate use of, and **alternatives** to, blood components and blood products.”
- ❖ “Blood components and blood products will never be without risk. The best way to reduce risk is to reduce their use.” — *Final Report, Volume 3, Page 1052.*



# Informed Consent / Patient Choice

“At a minimum, informed consent to the administration of blood products involves...  
an explanation by the physician in language the patient will understand of the risks and benefits of, and options to, an allogeneic blood transfusion...”



Commission of Inquiry on the Blood System in Canada.

*Interim Report*, 1995, p. 63.



Medicine is “the art  
of managing uncertainty.”

Naylor D, MD. *The Globe and Mail* 1995 Sep 13:A-7.





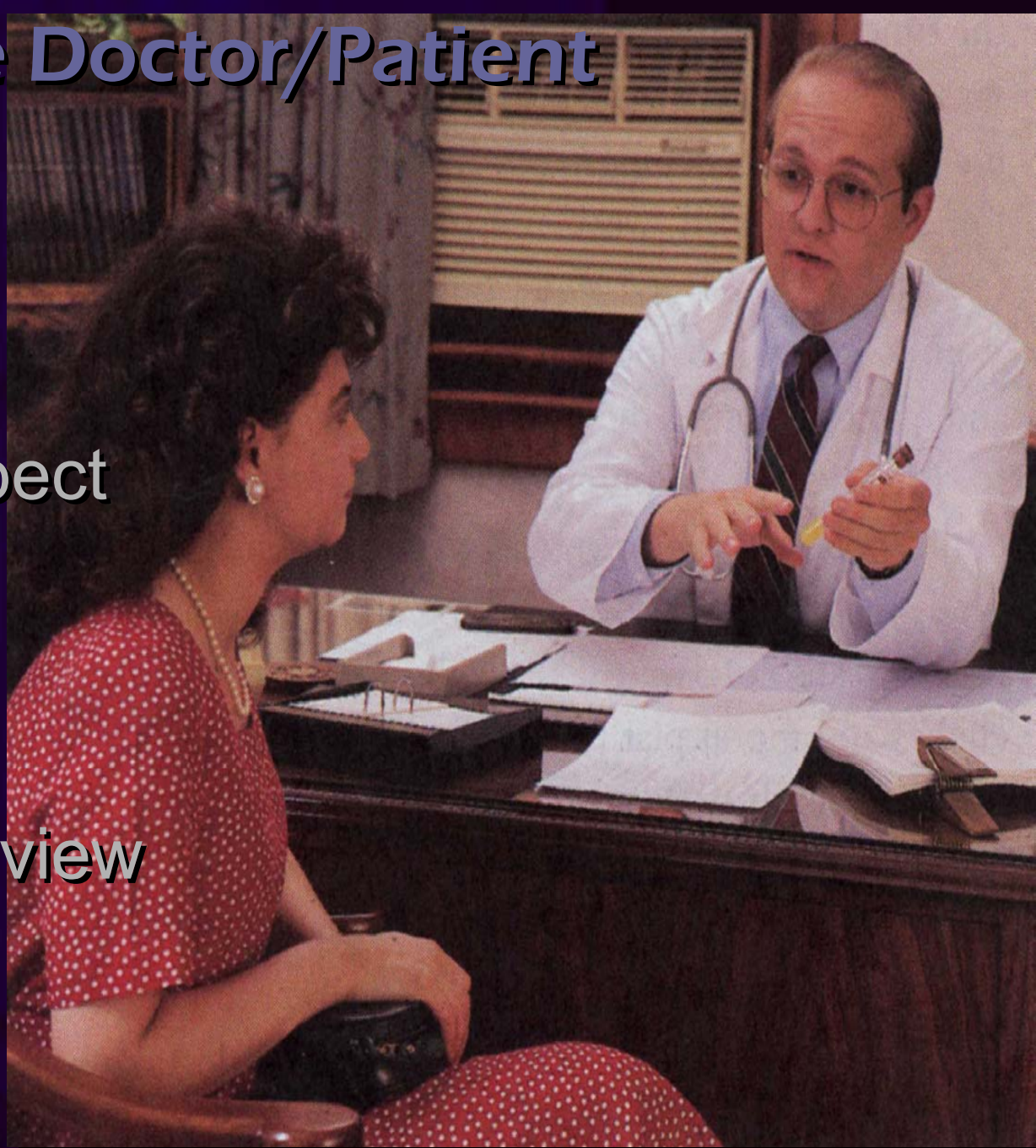
# Hospital Liaison Committee Network

- ❖ **Information service** for physicians
- ❖ **Facilitate consultations** with specialists experienced in use of transfusion-alternative strategies
- ❖ **Presentations** to hospital staff, residents, medical students
- ❖ **Community-based ministers**
- ❖ **Experience in conflict prevention and resolution**
- ❖ **Consultation on blood conservation program development**



# Protecting the Doctor/Patient Relationship

- ❖ Mutual Respect
- ❖ Conscience
- ❖ Understand view



# Strategies to Avoid Blood Transfusion

## Drugs

- Hemostatic agents
- Hematopoietic drugs
- Volume expanders
- Oxygen therapeutics

## Blood Conservation Devices

- Blood salvage
- Hemostatic scalpels
- Minimally invasive therapy
- Blood microsampling

## Techniques

- Meticulous surgical hemostasis
- Tolerance of anemia
- Hemodilution
- Controlled hypotension
- Restricted diagnostic phlebotomy



“It is not the lack of [transfusion alternative strategies], but perhaps a lack of knowledge about them, which may inhibit many practitioners from their useful application.”

Thomas JM. The worldwide need for education in nonblood management in obstetrics and gynaecology. *J Soc Obstet Gynaecol Can* 1994;16(3):1483-7.



# Surgery Without Blood Transfusion in Canada

“Major cardiac, vascular, gynaecological and obstetrical, orthopaedic, and urological surgery can be performed successfully without using blood or blood products in Jehovah’s Witness patients.”

Wong DHW, Jenkins JC. Surgery in Jehovah’s Witnesses.  
*Can J Anaesth* 1989;36(5):578-85.



# Surgery Without Blood Transfusion in Canada

- Tetralogy of Fallot, primary open-heart surgical repair in 4.8 kg infant  
- *Hospital for Sick Children (Toronto)*
- Nephrectomy in 70-year-old - *Dartmouth General Hospital*
- Pulmonary cystic adenectomy, 7-day old infant  
- *Health Sciences Centre (Winnipeg)*
- Renal transplant - *L'Hôtel-Dieu de Québec, (Québec City)*
- Total hip arthroplasty - *Sir William Osler (Brampton)*
- Hepatic transplant - *Royal Victoria Hospital (Montréal) & University Hospital (London)*
- Wound excision for severe burns - *University of Alberta Hospitals (Edmonton)*
- Thoracic aneurysm repair - *St. Paul's Hospital (Vancouver)*



# Bloodless Surgery – A Reality

- ❖ Blood Conservation/Bloodless Programs:
  - More than 32 programs in development in Canada (25 ONTraC sites in Ontario and increasing)
  - More than 90 in United States
  - More than 200 institutions worldwide



“The challenge of religion versus medicine has been well met, and much as been gained.”

“Doctors have learned that . . . [t]he patient’s ideals and honor must be respected. . .

Sometimes, as in the case of surgery for Jehovah’s Witnesses, the modified procedures developed can be of **wide medical benefit to other patients.**”

Cooley D. Without transfusion. *Inside Baylor Med* 1968;(2):2-4.



“Quality medical care  
is the capacity of the elements of that  
care to achieve legitimate medical and  
nonmedical goals.”

Steffen GE. Quality medical care: a definition.  
*JAMA* 1988;260(1):56-61.



# Advance Medical Directive

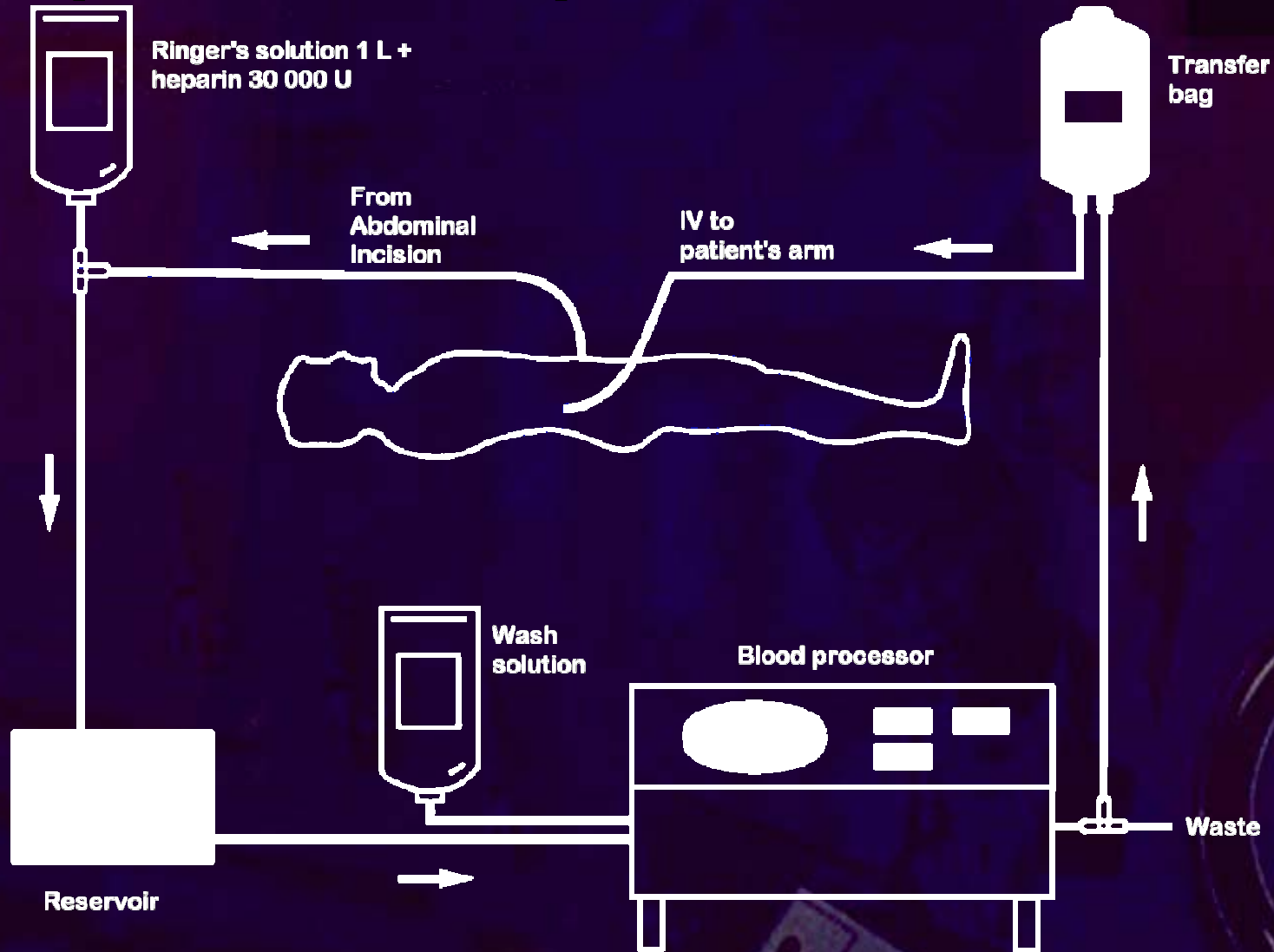
- ❖ No allogeneic (donor) blood transfusions under any circumstances
- ❖ Renewed periodically
- ❖ Court-tested
- ❖ Emergency contact persons listed on reverse

## ADVANCE MEDICAL DIRECTIVE

1. I, \_\_\_\_\_, make this advance directive as a formal statement of my wishes. These instructions reflect my resolute and informed decision.
2. I direct that **no blood transfusions** (whole blood, red cells, white cells, platelets, or blood plasma) be given to me under any circumstances, even if deemed necessary to preserve my life or health. I accept *non-blood* expanders, *nonblood* drugs that control hemorrhage and stimulate the production of blood cells, and other *nonblood* management.
3. This directive is an exercise of my right to decide medical treatment in accord with my deeply held values and convictions. I am one of Jehovah's Witnesses, and I make this directive out of obedience to commands in the Bible, such as: "Keep abstaining . . . from blood."—Acts 15:28, 29.
4. **Regarding minor fractions of blood, my instructions are:** [initial those that apply]  
(a) \_\_\_\_\_ I REFUSE ALL (b) \_\_\_\_\_ I REFUSE ALL EXCEPT:  
\_\_\_\_\_  
\_\_\_\_\_  
(c) \_\_\_\_\_ I may be willing to accept some minor blood fractions, but the details will have to be discussed with me if I am conscious.
5. **Regarding medical procedures involving the use of my own blood:** I *refuse* to predonate and store my blood for later infusion. I *accept* diagnostic procedures such as blood testing.  
My other instructions regarding use of my blood are: [initial those that apply]  
(a) \_\_\_\_\_ I REFUSE ALL (b) \_\_\_\_\_ I REFUSE ALL EXCEPT:  
\_\_\_\_\_  
\_\_\_\_\_  
(c) \_\_\_\_\_ I may be willing to accept certain medical procedures involving my blood, but the details will have to be discussed with me if I am conscious.
6. **Additional Instructions:** [this may be left blank]  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



# Example of Intraoperative Blood Salvage



Spence RK. Autologous transfusion techniques for Jehovah's Witnesses - practical outlines. In: Belghiti J, et al, editors. *Bloodless surgery: surgical and anaesthetic aspects; legal and ethical issues*. Paris: Arnette Blackwell; 1997. p 93-8.



# MANAGEMENT OF ACUTE BLEEDING & SHOCK

## Avoid Delay!

**“In our series of actively bleeding Jehovah’s Witnesses, initial conservative treatment with delayed surgery led to a 75% mortality rate compared with a 20% mortality rate in patients who underwent emergency operation within 24 hours of admission to the hospital.”**

Atabek U, et al. *Arch Surg* 1992;127(3):349-51.



# MANAGEMENT OF ACUTE BLEEDING & SHOCK

1. Oxygen therapy
2. Stop the bleeding
  - Direct pressure
  - Hemostatic agents to enhance hemostasis
  - Endoscopic treatment (e.g., GI bleeding)
  - Prompt surgery to control hemorrhage (and staged repair)
    - Damage control strategy
    - Autotransfusion (blood cell salvage)
    - Expeditious arterial embolization
3. Treat shock (judicious fluid/volume management)
4. Rapid rewarming
5. Early erythropoietin therapy
6. Prevent infection
7. Transfer patient if facilities not available



**Meeting the Challenge  
of Medical Care  
Without Transfusion for  
Jehovah's Witnesses**



# Management of Cancer and Leukemia Without Transfusion

- ❖ Intensive therapy with greater tolerance of anemia
- ❖ Individualized chemotherapy dosing
- ❖ Hematopoietic drugs (e.g., rHuEPO, rHuG-CSF)
- ❖ Aggressive prophylaxis of anemia (rHuEPO, iron)
- ❖ Pharmacologic agents to enhance hemostasis (tranexamic acid, aminocaproic acid, desmopressin, rFVIIa)
- ❖ Restricted diagnostic phlebotomy



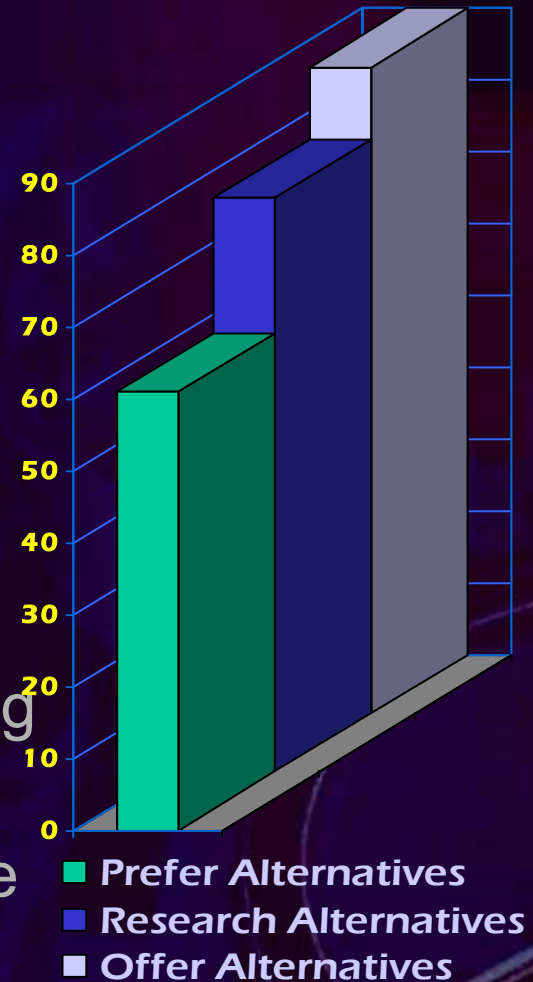
# Public Demand for Alternatives

## ❖ 1996 Gallup poll

- 89% preferred an alternative to donor blood

## ❖ 2001 Decima Research poll:

- 61% prefer alternatives to transfusion
  - *even though* 80% feel that system is safe
- 80% felt money is better spent researching alternatives than increasing testing
- 90% believe that alternatives should be offered whenever possible



# Information on the Web...

## ❖ Jehovah's Witnesses:

- <http://www.watchtower.org>

## ❖ Medical Information:

- University of Pisa (Italy) Bloodless Medicine Research
  - <http://www.med.unipi.it/patchir/bloodl/bmr.htm>
- PNBC - Physicians and Nurses for Blood Conservation
  - <http://www.pnbc.ca>
- NATA - Network for the Advancement of Transfusion Alternatives
  - <http://www.nataonline.com/>
- SABM - Society for the Advancement of Blood Management
  - <http://www.sabm.org>



# **Meeting the Challenge of Medical Care Without Blood Transfusion for Jehovah's Witnesses**



# Bloodless Medicine and Surgery: A Reality

“Several methods are available to the surgeon who wishes to perform bloodless surgery...

**Alone**, each of these techniques can successfully reduce the need for homologous blood transfusion by 50% to 70%.

**By combining these strategies**, the surgeon can achieve the goal of performing bloodless surgery for most patients.”

Editor-in-Chief: Samuel A. Wells, Jr.  
Editorial Board: W. Gerald Austen, Eric W. Fonkalsrud,  
Hiram C. Polk, Jr., Murray F. Brennan,  
Felicien M. Steichen  
Spence RK, et al. Transfusion and surgery.  
*Curr Probl Surg* 1993;30(12):1103-80.

Mosby



“Application of multiple blood conservation measures ... can **significantly decrease bleeding and need of allogeneic transfusion** in coronary artery bypass grafting in a safe and **cost-effective** manner.”

Helm RE, et al. Comprehensive multimodality blood conservation:  
100 consecutive CABG operations without transfusion.  
*Ann Thorac Surg* 1998;65(1):125-36.



“We have expanded our policy to try to **avoid the use of blood products** in cardiac operations on infants and children with a body weight of 5 kg or more who need repair of congenital heart defects with CPB and **whose parents are *not* of the Jehovah’s Witness faith.**”

van Son JAM, et al. Strategies for repair of congenital heart defects in infants without the use of blood. *Ann Thorac Surg* 1995;59(2):384-8.

