

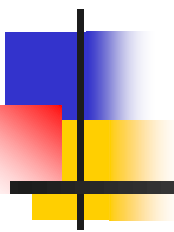
**Ethics and Policy in HTA: ★
Patient Preferences at Odds with HTA ★
The Example of Autologous Blood ★
Donation for Spinal Fusion ★**



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Patient Preferences at Odds with HTA: The Example of Autologous Blood in Spinal Fusion



Evolution and Controversies in HTA :

- **Hospital HTA**
- **Patient involvement in HTA**
 - **Patient preferences opposite to MD**

Preferences/ Risk Eval

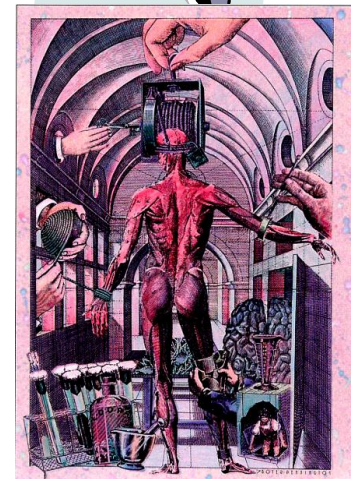
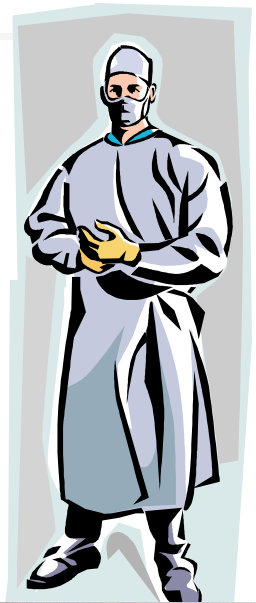
Blood Transfusion Lumbar Fusion

- **Surgeons**

- Risk averse
- Autologous Blood Donation Prog

- **Patients**

- Assumed (by MD's) Risk Averse
- Automatic / protocol driven involvement all fusion patients autologous blood donation program



Spine Week-Porto 2004

- **Hotel Infante de Sangres**
 - **Lobby Bar**
 - Marek Szpalski
 - Robert Gunzburg
- **European Spine Journal Supplement 2004 – Eds.**
 - **Research and Evidence about Blood Sparing in Spinal Surgery**
 - **Limited data routine surgery**
- **Presbyterian St. Luke's Medical Center, Denver**



Quality Assurance Screen

- 100 consecutive 1-3 level posterior lumbar spinal fusions
- Review blood useage
 - Autologous
 - Cell saver
 - Bank

55 units autologous
blood **discarded**



Analysis

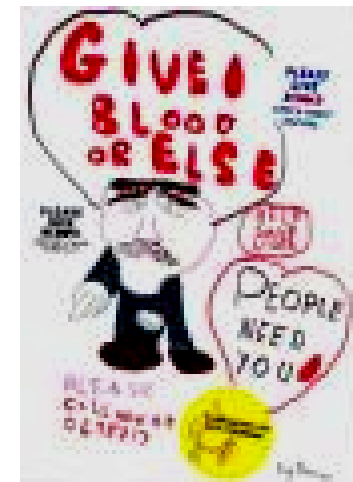
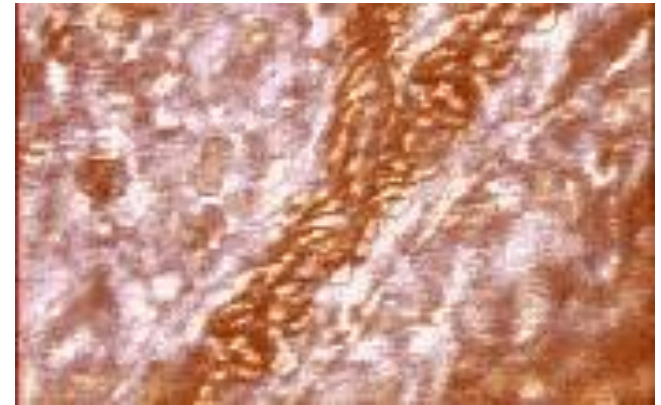
Blood Useage

- **55 Units Auto Wasted**
 - 50/55 – 1 level fusion
- **1 level fusion**
 - 64/85 donate av. **1.9units**
 - Auto trans 53/85
 - 15/85 cell saver \approx 500cc
 - 22/85 assembled-No Blood
 - 8/85 Bank Blood = **9.4%**
 - 8/8 no pre-op Auto donate
 - No cell saver
 - Majority blood loss \rightarrow drains



Health Technology Assessment Approach

- **Benefit/Effectiveness**
- **Complications/Risk**
 - Transfusion reaction
 - Disease transmission
- **Cost**
 - Bank
 - Autologous
 - Cell Saver
 - Hematopoietins(\$12-16,000)
- **Physician preferences**
- **Patient preferences**



Transfusion Cost

- **Lab Costs (Hb, T&C etc.)**
 - \$133 / 106€ / 210 BRL
- **Autologous Unit - PSL**
 - \$175 / 139€ / 277 BRL
- **Bank Unit Blood**
 - \$393 / 312€ / 622 BRL
- **Cell Saver**
 - **Bowl only**
 - \$195 / 155€ / 309 BRL
 - **Complete processing**
 - \$874 / 694€ / 1383 BRL



"The labs are back."

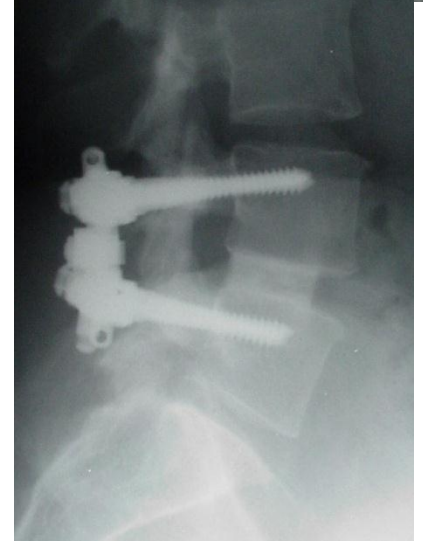
Risk/Complications

- **HIV 1:1,930,000**
 - **Hep B 1:137,000**
 - **Hep C 1:1,000,000**
 - **HTLV-1 1:641,000**
 - **Death 1:1,000,000**
-
- **Stramer SL ed. Blood Safety in the New Millenium. American Association of Blood Banks. Bethesda, Maryland 2001.**

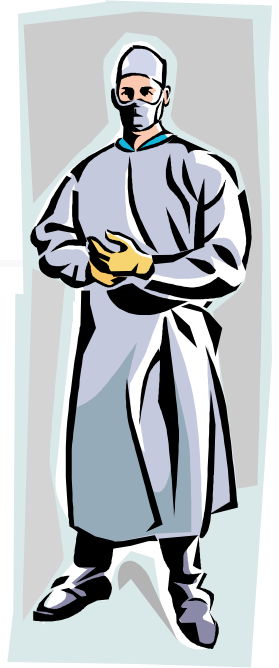


Proposal 1 Level Fusion 30 Patient Pilot Study

- Cell saver – bowl \$195/Run \$874
- Bank Blood - \$393
- No protocol auto donation- \$175
 - Option autologous donation
 - Risk discussion
 - Hep/HIV/Trans Reaction/Death etc.
 - Transfusion experience 1 level fusion 9.4%
- Patient Preference for auto blood
 - 0 / 30



Preferences Discussion

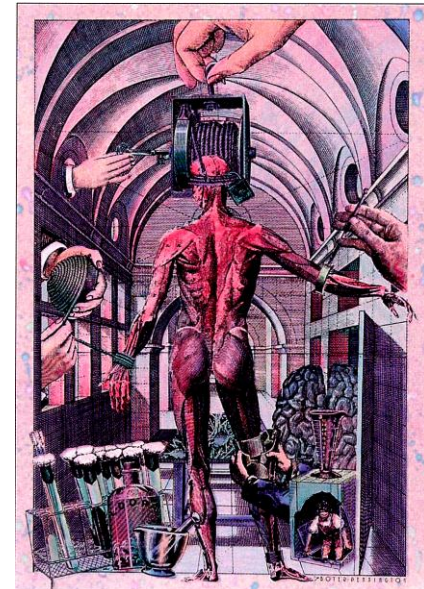


■ Physician Preferences

- Products of Training / Experience
- ?Better Rational?
 - Medical education/ clinical observation
- ? More Bias ?

■ Patient Preferences

- Surprisingly accepting of risk vs. blood donation/needles/travel/Sx delay
- At odds vs. Surgeon Preferences
- Contradictory to HTA



Evolving HTA

Hospital/Pt Preferences

- **100 patient QA review**
 - Bank blood **9.4%**
- **Pilot Study – No Autologous Blood**
 - Bank blood – **25%**
 - Cell saver
 - Initial criteria for processing
 - 1000 cc
 - Rarely Used – **3%**



Evolving HTA

Hospital/Pt Preferences

Pilot Version 2

- **Cell Saver**

- **Lower criteria processing**

- **400 – 500 cc**

- **↑ Cost - ↓ Risk**

- **Pt Education- ?Introduce MD Bias?**

- **Revised Rates Bank Blood from Pilot V1**

- **?some pts choose donate auto?**

- **?Interactive Video?**

- **Pts with HIV/Hepatitis/Transf react**

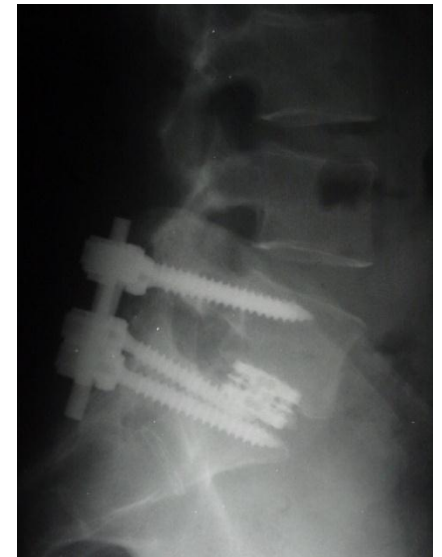
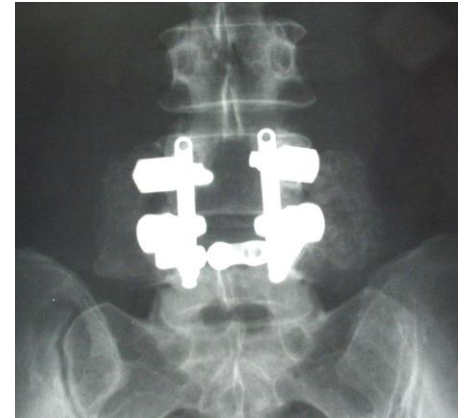


Evolving HTA

Hospital/Pt Preferences

Pilot Version 2

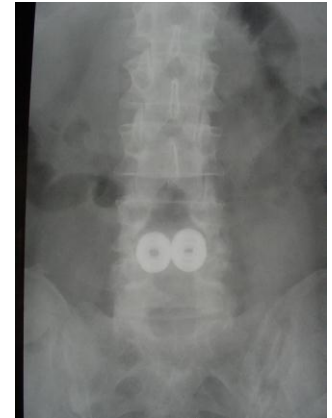
- **Other Subgroup Analysis for Risk of Transfusion**
 - **Pre-op Hb/Hct**
 - **Sex**
 - **Age**
 - **Procedure**
 - **Posterior/minimally invasive**
 - **360°**
 - **Surgeon**
 - **Operating time**



The Example of Autologous Blood Donation for Spinal Fusion

Summary

- **Evolving process of Hospital HTA**
 - **Cost Effective Quality Care**
 - **Refining protocols**
 - **Additional subgroup analysis**
- **Patient Preferences can be opposite of MD preferences**
 - **Role of bias – MD/Pt**
 - **Intensity of Patient Education**



Winter in Colorado vs Rio Blizzard 2003



Thank You

Breckenridge, Colorado



Thank You

