Liver Transplantation

- Is liver transplantation experimental?
- Does Memphis have a transplant program?
- What is the quality of the Memphis program?
- What is the survival rate after transplantation?
• “What does Memphis have?”
Memphis

• Proud tradition in Medicine and Nursing
• Long history
• Often unrecognized
Memphis Civil War Hospital 1862
Civil War Physicians in Memphis
Memphis Yellow Fever epidemic
1878
Episcopal Order of St. Mary
Memphis physicians in France
World War I
THE USE OF SURGICAL PITUITRIN IN THE CONTROL OF ESOPHAGEAL VARIX BLEEDING

An Experimental Study and Report of Two Cases

John H. Kehne, M.D., Felix A. Hughes, M.D., and Michael L. Gompertz, M.D., Memphis, Tenn.

Surgery 39:917-925, 1956
Memphis

- 1970 first adult kidney transplantation
- 1982 first adult liver transplantation
- 1983 first pediatric liver transplantation
- The University of Tennessee has the third oldest liver transplantation program
Transplantations 1982-2000

- 358 adults
- 54 children

Shokouh-Amiri MH, Clinic Transpl 255-261, 2000
### Adult transplantations 1982-2000

- **Hepatitis C**: 40%
- **Alcohol**: 11
- **Primary biliary cirrhosis**: 11
- **Hepatitis B**: 7
- **Retransplant**: 5.7
- **Primary sclerosing cholangitis**: 8
- **Fulminant hepatic failure**: 2
- **Others**: 15
Pediatric liver transplantation

- Biliary atresia 50%
- Alpha 1 antitrypsin deficiency 7.7%
- Fulminant hepatic failure 12%
- Hepatitis C/Non-A Non B 10%
- Malignancy 10%
- Others 10%
Advances

• 1992-1997, portions of the liver were transplanted in 12 children
• Since 1997, donor livers were split so two patients (child and adult) could be given a portion of the same liver
• 1997-2000 three split livers and one living related donor transplant was performed in children
• 1999-2000, 16 living related adult to adult donations were performed
• Donors stayed in the hospital an average of 8 days
• 2004 UT moved to Methodist University
• 412 liver transplantations performed 1982-2000
Memphis 2006

• 93 liver transplantations performed
  • 89 Adults
  • 4 Children

www.unos.org
Region 11 (KY, TN, NC, SC, VA) 2006

- 587 Liver transplantations
- 568 Deceased donors
- 19 Living related donors

www.unos.org
U.S. 2006

- 6,650 Liver transplantations
- 6,362 Deceased donors
- 288 Living related donors

United Network for Organ Sharing
www.unos.org
Memphis Waiting List

72 patients awaiting Liver transplantation

- 30 Hepatitis C
- 6 Alcohol
- 4 Non-alcoholic steatohepatitis
- 2 Hepatitis B
- 30 Other

www.unos.org
Waiting list

- 17,434 patients are waiting for a liver transplantation

www.unos.org
## Died on the Waiting list
### 2004-2007

<table>
<thead>
<tr>
<th>Time</th>
<th>Memphis</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months</td>
<td>3.8%</td>
<td>7.5%</td>
</tr>
<tr>
<td>12 months</td>
<td>6.4</td>
<td>9.4</td>
</tr>
<tr>
<td>18 months</td>
<td>7.7</td>
<td>10.7</td>
</tr>
<tr>
<td>Percentile</td>
<td>Memphis</td>
<td>U.S.</td>
</tr>
<tr>
<td>------------</td>
<td>--------------</td>
<td>-------</td>
</tr>
<tr>
<td>5</td>
<td>0.2 months</td>
<td>0.2</td>
</tr>
<tr>
<td>10</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>50</td>
<td>25</td>
<td>24.2</td>
</tr>
</tbody>
</table>

[www.ustransplant.org](http://www.ustransplant.org)
Survival 1982-2000

Figure 2. Patient and graft survival in adult liver transplant recipients University of Tennessee.

Figure 3. Patient and graft survival in pediatric liver transplant recipients University of Tennessee.
# Transplant Patient Survival

## 2004-2007

<table>
<thead>
<tr>
<th>Time</th>
<th>Memphis</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 month</td>
<td>90%</td>
<td>95.9%</td>
</tr>
<tr>
<td>1 year</td>
<td>87.5</td>
<td>86.5</td>
</tr>
</tbody>
</table>
U.S. Liver Transplant Survival 2006

Diagnosis 1 yr 3 yr
• Non-cholestatic cirrhosis 85 76%
• Cholestatic liver disease 90 85%
Region 11 (KY,TN,NC,SC,VA)  
Survival 2006

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>1 yr</th>
<th>3 yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-cholestatic cirrhosis</td>
<td>85</td>
<td>77%</td>
</tr>
<tr>
<td>Cholestatic liver disease</td>
<td>89</td>
<td>84%</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Memphis</td>
<td>U.S.</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------</td>
<td>------</td>
</tr>
<tr>
<td>White</td>
<td>80%</td>
<td>72%</td>
</tr>
<tr>
<td>African-American</td>
<td>20</td>
<td>11</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>Asian</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>
## Mid-South Liver Donors 2005-2006

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Memphis</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>74%</td>
<td>67%</td>
</tr>
<tr>
<td>African American</td>
<td>19</td>
<td>16</td>
</tr>
<tr>
<td>Hispanic</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>Asian</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

[www.ustransplant.org](http://www.ustransplant.org)
Quality of life

- First study of patient outcomes for transplantation looking at quality of life measurement
- The Memphis Survey:
  - Emotional burden
  - Life responsibilities
  - Mobility
  - Gastrointestinal distress
  - Medication side effects

Hathaway D, Clinical Transplantation 17:183, 2003
Quality of Life

- 722 patients
- Mean age 49.7
- Average of 4.5 years after transplantation
- 90% rated their organ function “good” or “excellent”

Hathaway D, Clinical Transplantation 17:183, 2003
Conclusions

- Memphis has a long tradition in Medicine
- The University of Tennessee has a successful liver transplantation program
- Community support and awareness are key
- Organ donation and advances in transplantation have drastically improved care