July 2011

**ROTATION: SURGICAL CRITICAL CARE AND TRANSPLANTATION SURGERY**

**ROTATION DIRECTOR:** Johnny Hong, MD

**SITE:** RRUMC

**DESCRIPTION OF ROTATION:**

The UCLA Abdominal Transplant Programs are one of the largest in the world. The services perform roughly 200 liver, 300 kidney, 8-12 small intestine, and 15-20 pancreas transplants per year. In addition, the liver division also has a high volume hepatobiliary-pancreatic surgery component. The Transplantation Surgery Service consists of 1 month in the R1, 1 month in the R2, and 2 months in the R4 year. The R1 will have additional exposure to kidney transplantation on the Urology rotation.

**LEVEL OF TRAINEE: R4**

R4s on this service will be primarily responsible for learning the operative procedures of the transplant service and for overseeing care of the patients. The R4 resident will be in the unique position of being on two separate services: 1) the liver and pancreas transplant service and 2) the kidney transplant service. These experiences will be combined to give a wide breadth of the transplant experience in all abdominal solid organ transplantation.

Major Objectives:

1. Demonstrate knowledge of and acquire the surgical expertise of the kidney transplant recipient operation.
2. Develop familiarity with and assist with the liver transplant operation.
3. Participate in the organ procurement operation and assist in the preparation of the liver and kidney allograft for transplantation.
4. Develop familiarity with and assist with the pancreas transplant operation.
5. Develop familiarity with and assist with the small intestinal transplant operation.
6. Gain greater understanding of the mechanisms of pharmacologic immunosuppression used with organ transplantation, side effects, and indications for use of various agents.
7. Participate in hepatobiliary surgery operations and understand the surgical anatomy of the liver and porta hepatitis and how their anatomy affects liver resection surgery.

*R4 should be available during various evenings for organ procurement and transplant operations. R4 will be on call for at least 1 weekend a month for organ procurements and 1 weekend for kidney transplants.*

**Educational Methodology:** The resident will achieve the stated objectives using the following methods:

1. Direct involvement in patient care and management, under the supervision of faculty (transplant, pulmonary-critical care, and anesthesia).
2. Personal performance of procedures.
3. Attendance of lectures and conferences.

**GOALS AND OBJECTIVES:**

To gain exposure in the performance of organ procurement for transplantation, technical proficiency in kidney transplantation, and assisting in the performance of liver and pancreatic transplantation. Residents will also be involved in evaluation of complex hepatobiliary patients, operative interventions, and assist in oversight in the care of patients on the service.
**ASSESSMENT:**

Monitoring of the accomplishment of the stated objectives will be performed using the following methods:

1. **Global Rating:** end of rotation evaluation of resident performance to assess the resident’s demonstration of Core Competencies with respect to the stated objectives by faculty, other team resident members, students, and nursing staff.
2. **Case Logs:** auditing of operative cases pertinent to the specialty in the Surgical Operative Log.
3. **Written Examination:** performance on the annual ABSITE examination, Gastrointestinal and Body as a whole (clinical management) systems section.
4. **Patient Survey:** performance will be assessed by patient surveys administered though the rotation.
5. **For additional information please refer to the Resident Milestones document on the UCLA Surgical Education website:**
<table>
<thead>
<tr>
<th>ACGME Competency</th>
<th>Developmental Milestones Informing ACGME Competencies</th>
<th>Time Frame</th>
<th>Assessment Methods/Tools</th>
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| **Patient Care** | 1. Participate in the pre- and post-operative surgical management of patients after organ transplantation.  
2. Participate in the perioperative management of immunosuppressive drug therapy, including monitoring drug levels and treating potential toxicity.  
3. Diagnose acute and chronic organ rejection using clinical signs and symptoms as well as serum chemistries and radiologic studies.  
4. Recognize and manage postoperative surgical complications, including wound infection, anastomotic stenoses and leaks, and lymphocele formation in immunosuppressed patients.  
5. Participate in the evaluation of potential candidates for living-related and cadaveric organ transplantation, including a. clinical suitability b. strength of social support c. expected graft and patient survival  
6. Participate in the evaluation of patients suspected of organ rejection to include: a. laboratory and radiologic testing b. administration of immunosuppressive agents c. following patients for potential acute and chronic side effects | 4 weeks | Global Rating  
Case Logs  
Written Examinations  
Patient Survey  
Feedback from faculty/attending physicians at rounds and OR |
| **Medical Knowledge** | **Kidney Transplantation**  
1. Understand the organ procurement operation and methods of organ preservation.  
2. Understand methods of kidney preparation including differences with the right and left kidneys.  
3. Understand methods of the organ transplant operation and differences in placement of kidney to right or left iliac fossa.  
4. Understand issues regarding stents and drains in kidney transplantation.  
**Liver Transplantation**  
1. Understand the organ procurement operation and methods of organ preservation.  
2. Understand principles of graft preparation and arterial anatomical variations.  
3. Understand and participate in the recipient hepatectomy and allograft implantation; understand differences in approach and variations including use of veno-venous bypass.  
**Pancreas Transplantation**  
1. Understand the organ procurement operation and methods of organ preservation. | 4 weeks | Global Rating  
Written Examinations  
Completion of rotation specific SCORE assignments  
Feedback from faculty/attending physicians at rounds and OR |
1. Understand the organ procurement operation and methods of organ preservation.
2. Understand principles of graft preparation and arterial anatomical variations.
3. Understand the main issues regarding postoperative care of these patients.

**Small Intestine**
1. Understand the organ procurement operation and methods of organ preservation.
2. Understand principles of graft preparation and arterial anatomical variations.
3. Understand the main issues regarding postoperative care of these patients.

**General Issues in Transplantation**
1. Understand preoperative assessment and optimization.
2. Understand indications for solid organ transplantation.
3. Understand contraindications to transplantation.
4. Understand issues in the assessment of donor suitability.
5. Understand general principles of organ preservation.
6. Understand the concept of and impact of cold / warm ischemia.
7. Define brain death and understand the ethical issues surrounding brain dead donors.
8. Define donation after cardiac death.
10. Demonstrate a greater understanding of the mechanisms of pharmacologic immunosuppression used with organ transplantation, side effects, and indications for use of various agents.
11. Complete all relevant modules of the SCORE curriculum: https://portal.surgicalcore.org/home

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<tr>
<th>Practice Based Learning</th>
<th>4 weeks</th>
<th>Global Rating</th>
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<tbody>
<tr>
<td>1. Utilize the medical literature to hone practice indications and guidelines and critically evaluate current management.</td>
<td></td>
<td>Written Examinations</td>
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<td>2. Understand modern concepts of evidence grading and outcome assessment.</td>
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<td>Patient Survey</td>
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<thead>
<tr>
<th>Professionalism</th>
<th>4 weeks</th>
<th>Global Rating</th>
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<tbody>
<tr>
<td>1. Work within a multidisciplinary critical care team.</td>
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<td>Patient Survey</td>
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<td>2. Participate in weekly multidisciplinary rounds</td>
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<td>Feedback from faculty/attending physicians at rounds and OR</td>
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<td>3. Demonstrate respect, compassion, integrity, and kindness in relationships with patients, families, and colleagues.</td>
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<td>4. Demonstrate sensitivity and responsiveness to gender, age, culture, religion, sexual preference, socioeconomic status, beliefs, behaviors and disabilities</td>
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| Interpersonal Relationships And Communication | 1. Interact effectively and professionally with patients, families, physicians, nurses, and other members of the health-care team.  
2. Practice compassionate end-of-life care  
3. Provide effective consultation to other physicians and health care professionals  
4. Maintain comprehensive, timely, and legible medical records | 4 weeks | Global Rating  
Written Examinations  
Patient Survey  
Feedback from faculty/attending physicians /hospital staff /patients |
| Systems Based Practice | 1. Understand and utilize indications for ward and ICU admission.  
2. Understand and utilize criteria for transfer into and out of the ICU and hospital discharge.  
3. Understand concepts related to transfer of patients from outside institutions.  
4. Understand concepts of cost-efficiency in the ICU and ward.  
5. Understand limitations of care and concepts of futility. | 4 weeks | Global Rating  
Case Logs  
Hour logs  
Completion of required evaluations  
Completion of medical records  
Written Examinations  
Feedback from faculty/attending physicians at rounds and OR |