## PGY-2: Goals and Objectives

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<th>Rotation</th>
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<td>Dr. R. Greco</td>
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<td>Stanford</td>
<td>Surgical Intensive Care/Trauma</td>
<td>Dr. D. Spain</td>
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<td>Cardiothoracic Surgery</td>
<td>Dr. T. Burdon</td>
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<td>Critical Care Medicine</td>
<td>Dr. J. Barr</td>
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<tr>
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<td>General Surgery</td>
<td>Dr. R. Illano</td>
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<td>Valley Medical Center</td>
<td>General Surgery</td>
<td>Dr. A. Garland</td>
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<td>Valley Medical Center</td>
<td>Plastic Surgery</td>
<td>Dr. Y. Karanas</td>
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<td>Dr. R. Greco</td>
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II. Goals and Objectives:

A. Medical Knowledge

I. Surgical Oncology

Goal: The resident will achieve a detailed knowledge of the evaluation and management of surgical oncology patients.

Objectives:

1. Discuss the basic pathophysiology of the mechanisms involved in malignant transformation, tumor growth, and metastases formation.
2. Discuss the treatment of malignant melanoma, including:
   a. staging of malignant melanoma
   b. indications for operative management of melanoma and the selection of appropriate surgical procedures
   c. adjuvant treatment regimens and indication for their use in patients with melanoma
   d. treatment of advanced melanoma
3. Recite the natural history and biologic behavior of specific tumor types, including:
   a. breast cancer
   b. colorectal cancer
   c. upper GI malignancies
   d. melanoma
   e. sarcoma
4. Recite the details of the management of wound care in the surgical oncology patient.
5. Discuss the details of the use/dosing of chemotherapy in surgical oncology patients.

II. Gastrointestinal Surgery

Goal: The resident will achieve a detailed knowledge of the evaluation and management of the general GI surgical patient.

Objectives:

1. Discuss the evaluation, diagnosis, and management of the acute abdomen.
2. Discuss the evaluation, diagnosis, and surgical management of the stomach and duodenum, including:
   a. benign stomach tumors
   b. gastritis and upper GI bleeds
   c. malignancies of the stomach and duodenum
3. Discuss the evaluation, diagnosis, and surgical management of the small intestines, including:
   a. intestinal obstruction
   b. regional enteritis/Crohn’s Disease
   c. Meckel’s diverticulum
   d. carcinoid tumors
   e. appendicitis
4. Discuss the evaluation, diagnosis, and surgical management of the colon, including:
   a. diverticulitis
   b. benign and malignant neoplasms of the large intestine
   c. ulcerative colitis
   d. constipation
   e. benign and malignant neoplasms of the rectum
   f. perirectal abscess
   g. pilonidal disease
   h. hemorrhoids
   i. anal fissures
   j. Crohn’s disease
   k. intestinal ischemia
   l. inflammatory bowel disease
5. Discuss the evaluation, diagnosis, and surgical management of the pancreato-biliary system, including:
   a. acute cholecystitis
   b. chronic cholecystitis and cholelithiasis
   c. cholangitis
   d. gallstone ileus and fistula
   e. gallbladder carcinoma
III. Breast Surgery

Goal: The resident will achieve a detailed knowledge of the evaluation and management of the breast patient.

Objectives:
1. Discuss the evaluation, diagnosis, and surgical care of a breast mass.
2. Describe the evaluation of non-palpable breast abnormalities.
3. Discuss the appropriate use of mammography, ultrasound, fine needle aspiration, and stereotactic biopsies.
4. Discuss the preoperative staging of breast cancer.
5. Recite the use of preoperative chemotherapy and radiation therapy for breast cancer.
6. Describe the indication for operative management of breast disease, and selection of appropriate surgical procedures.
7. Discuss the adjuvant treatment regimens and indications for their use in breast cancer.
8. Describe the treatment of advanced breast cancer.
9. Recite the screening for breast cancer.
10. Discuss the genetic predisposition to breast cancer and prophylactic mastectomy.

IV. Minimal Access Surgery

Goal: The resident will achieve a detailed knowledge and understanding of minimally access surgery.

Objectives:
1. Discuss the advantages and disadvantages of minimally invasive surgery.
2. Recite the physiologic effects of pneumoperitoneum, including:
   a. acidosis
   b. cardiovascular changes
   c. urine output
   d. pulmonary
   e. air embolism
   f. deep venous thrombosis
3. Discuss the basic equipment necessary for laparoscopic equipment.
4. Discuss the suitability of minimally invasive surgery for various disease processes.

IV. Endocrine Surgery

Goal: The resident will achieve a detailed knowledge of the evaluation and management of the endocrine surgery patient.

Objectives:
1. Discuss the evaluation, diagnosis, and management of surgical endocrine disease, including:
   a. hot and cold thyroid nodules
   b. adrenal masses and pheochromocytomas
   c. primary, secondary, and tertiary hyperparathyroidism
   d. pancreatic islet tumors
   e. inherited endocrine tumor syndromes
   f. thyroid malignancies
   g. substernal goiters
2. Discuss the care of patients with postoperative hypocalcemia

B. Patient Care

Goal: The resident will provide patient care that is compassionate, appropriate, and effective for the treatment of surgical problems.

Objectives:
1. Preoperatively evaluate the fitness of a patient for surgery, including cardiac screening, nutritional status, etc.
2. Interprets laboratory and diagnostic tests.
3. Gradually acquire the basic operative skills, including:
   a. incision of tissues
   b. suturing techniques
   c. knot tying
   d. gentle handling of tissues
   e. wound closure
   f. dressings
4. Postoperatively manage and care for surgical patients.
5. Participate, with graduated independence, in basic general surgery procedures with, including:
   a. placement of central venous catheters
   b. proctoscopies
   c. lymph node biopsies
   d. G and J-tube insertions
   e. drainage of abscesses
   f. fistulotomies and sphincterotomies
   g. hernia repairs
   h. tracheostomies
6. Participates, with graduated surgical independence, in general surgery procedures, including:
   a. bowel resections
   b. lysis of adhesions
   c. formation of stomas
   d. splenectomies
e. cholecystectomies
f. gastric resections
g. pancreatic resections
h. liver resections and biliary reconstructions

7. Participate in the diagnosis and care of patients with post-operative complications in general surgery.
8. Perform bedside procedures with graduated surgical independence, including:
   a. wound care
   b. drain care
   c. feeding tube placement and care
   d. placement and care of central lines
   e. pleural catheters
   f. nasogastric tubes
   g. foley catheters

11. Manage intraoperative and postoperative complications of minimally invasive surgery.
12. Participate in minimally invasive surgery, mastering techniques, including:
   a. maneuvering an angled laparoscope
   b. intracorporeal knot-tying
   c. closing port sites
   d. endoscopic stapling
   e. harmonic scalpel use
   f. placement of endoscopic loop
   g. bimanual dexterity

13. Participate with graduated surgical independence in endocrine surgery, including:
   a. thyroid lobectomies
   b. thyroidectomies
   c. parathyroid adenoma
   d. open and laparoscopic adrenalectomy

14. Participate with graduated surgical independence in breast cancer surgery, including:
   a. segmental mastectomy
   b. simple or modified radical mastectomy
   c. axillary dissection
   d. sentinel node mapping and sampling
   e. reconstruction after mastectomy

15. Participate with graduated surgical independence in the treatment of malignant melanoma, including:
   a. evaluation of suspicious skin lesions
   b. wide local excision
   c. sentinel node mapping
   d. regional lymph node dissections
   e. treatment of advanced melanoma

C. Practice Based Learning and Improvement

Goal: The resident will investigate and evaluate his or her own patient care practices, appraise and assimilate scientific evidence, and improve patient care practices.

Objectives:
1. Uses information technology to prepare for cases, using in the OR the knowledge of current modalities of care and the scientific evidence for that care.
2. Routinely analyzes the effectiveness of own practices in caring for surgery patients.
3. Improves own practices in the care of patients by integrating appropriately gathered data and feedback.
4. Educates medical students and other healthcare professionals in the practices of general surgery.
5. Functions independently with graduated advancement and appropriate faculty supervision.
6. Uses library sources to perform research and perform literature searches.
7. Understands the principles of clinical research and the application of biostatistics.

D. Interpersonal and Communication Skills

Goal: The resident will demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates.

Objectives:
1. Educates patients and families in follow-up strategies and rehabilitation for general surgery patients.
2. Demonstrates compassion for surgical oncology patients and families.
3. Provides adequate counseling and informed consent to patients.
4. Listens to patients and their families.
5. Assimilates data and information provided by other members of the general surgery health care team.
6. Charts and records accurate information.

E. System Based Practice

Goal: The resident will demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

Objectives:
1. Coordinates all aspects of the preoperative and postoperative care and rehabilitation surgical oncology patients.
2. Create a cost-effective, focused work-up of diagnostic testing.
3. Advocates for surgical patients within the health care system.
4. Refers surgical patients to the appropriate practitioners and agencies.
5. Facilitates the timely discharge and/or placement of surgery patients.
6. Learn to coordinate the admission of patients and communicate with primary care physicians, inpatient house staff, and consultants.
7. Discuss the scientific basis and regulations governing clinical trials and their importance in defining appropriate cancer therapy.
8. Coordinates the total care of the surgical oncology patient by partnering with other members of the oncology team, including:
   a. medical oncologists
   b. radiation oncologists
   c. social workers
   d. pastoral care
   e. hospice
   f. cancer researchers

F. Professionalism

Goal: The resident will demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

Objectives:
1. Develops a sensitivity of the unique stresses placed on families under care for general surgery.
2. Exhibits an unselfish regard for the welfare of general surgery patients.
3. Demonstrates firm adherence to a code of moral and ethical values.
4. Is respectful to patients and their families especially in times of stress to the family unit.
5. Respects and appropriately integrates other members of the general surgery health care team.
6. Provides appropriately prompt surgical consultations when requested.
7. Demonstrates sensitivity to the individual patient’s profession, life goals, and cultural background as they apply to surgery.
8. Is reliable, punctual, and accountable for own actions in the OR and clinic.
9. Understands the concepts of autonomy, beneficence, nonmaleficence, justice, and respect for life.
10. Maintains patient confidentiality.

References:
Farquharson's Textbook of Operative General Surgery (Hodder Arnold Publication) by Margaret Farquharson and Brendan Moran (2005)

III. Teaching Conference Schedule/Format:

1. Grand rounds: Every Tuesday
2. Core Course: Every Tuesday
3. Morbidity and Mortality Conference: Monday
4. Tumor Board: Wednesday
5. Preop conference

IV. Method of assessment of resident academic performance

1. Written evaluation of resident by faculty at end of rotation
2. Verbal feedback to resident by faculty
3. ABSITE yearly examination
4. Stanford GME House staff survey (annual)
5. Program Evaluation (annual)
6. 360 Evaluation
I. Rotation Format:

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<th>Rotation:</th>
<th>Surgical Intensive Care/Trauma</th>
<th>Rotation Duration:</th>
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<td>Dr. D. Spain</td>
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II. Goals and Objectives:

I. TRAUMA
A. Medical Knowledge
   Goal: The resident will achieve a detailed knowledge of the pathophysiology of blunt and penetrating trauma and will develop the skills needed to treat the trauma patient.
   Objectives:
   1. Describe the mechanisms of injury of blunt and penetrating injury.
   2. Recite the steps of the primary, secondary, and tertiary surgery.
   3. Discuss the diagnosis and treatment of thoracic injuries, including:
      a. Flail chest, Cardiac tamponade and contusion, Open and tension pneumothorax, Airway obstruction, Aortic transaction, Diaphragmatic tear, Esophageal tear, Rib fracture
   4. Discuss the diagnosis and treatment of abdominal injuries, including:
      a. splenic injury, hepatic injury, bowel injury, gastric injury, pancreatic injury, renal and bladder injury
   5. Discuss the diagnosis and treatment of central nervous system injury:
      a. brain injury, spinal cord injury
   6. Discuss the diagnosis and treatment of orthopaedic injuries.
   7. Recite the steps in the treatment of hemorrhagic shock.
   8. Recite the indications for and complications of blood product transfusion.

B. Patient Care
   Goal: The resident will provide patient care that is compassionate, appropriate, and effective for the treatment of trauma problems.
   Objectives:
   1. Perform a primary, secondary, and tertiary survey for a trauma patient.
   2. Function as the Team Leader in the resuscitation phase of trauma patient care.
   3. Perform the emergency treatment for flail chest, cardiac tamponade, pneumothorax, and airway obstruction.
   4. Participate in the operative treatment of thoracic and abdominal trauma.
   5. Perform a complete CNS evaluation of the trauma patient and assign GCS scores.
   6. Perform thoracostomy and thoracotomy on appropriate trauma patients.
   7. Perform a diagnostic peritoneal lavage.
   8. Participate in exploratory laparotomies for trauma patients.
   9. Treat patients with cardiac tamponade and perform pericardial centesis and pericardial windows.
   10. Participates in the evaluation, resuscitation, and initial and definitive treatment of trauma patients.

II. Critical Care Medicine
A. Medical Knowledge
   Goal: The resident will achieve a detailed knowledge of the techniques and practice of critical care medicine.
   Objectives:
   1. Discuss the fundamental concepts of critically ill patient care.
   2. Describe the physiological parameters of critical illness.
   3. Interpret physiologic patient data.
   4. Provide a differential diagnosis, develop diagnostic strategies, and evaluate therapeutic interventions.
   5. Discuss the collaborative practice style of ICU care setting.
   6. List the physiology, pathophysiology, and treatment of the various kinds of shock, including:
      a. hypovolemic
      b. cardiogenic
      c. septic
      d. distributive
      e. obstructive
   7. Discuss the common cardiopulmonary pathophysiology encountered in the ICU, including:
      a. myocardial infarction and cardiac dysrhythmias
      b. ARDS
      c. pulmonary embolism
8. Discuss the common renal pathophysiology encountered in the ICU, including:
   a. acute and chronic renal failure
   b. volume, osmolality, electrolyte derangements
   c. acid-base disorders
   d. hemodialysis and peritoneal dialysis

9. Discuss the common infectious pathophysiology encountered in the ICU, including:
   a. antimicrobial agents
   b. infection control
   c. severe infections
   d. sepsis and septic shock
   e. immunocompromised hosts
   f. hospital acquired and opportunistic infections

10. List the common medications used in the ICU setting and their:
    a. pharmacokinetics
    b. dynamics
    c. metabolisms
    d. toxicity
    e. excretion

B. Patient Care

Goal: The resident will gain experience patient care that is compassionate, appropriate, and effective for the treatment of critically ill surgical patients.

Objectives:
1. Demonstrate proficiency in ICU procedures, including:
   a. awake and urgent intubations
   b. central venous access
   c. pulmonary artery catheter placement
   d. arterial catheter placement

2. Manage mechanical ventilation, including:
   a. pressure ventilation
   b. volume ventilation
   c. cPAP
   d. PEEP
   e. intermittent mandatory ventilation

3. Participate in the monitoring, bioengineering, and biostatistics in the ICU, including:
   a. prognostic indices and severity codes
   b. invasive cardiac monitoring
   c. noninvasive cardiac monitoring (EKG, echo)
   d. brain monitoring (ICP, CPP)
   e. respiratory monitoring
   f. metabolic monitoring (O2 consumption, CO2 production)

4. Engage in the ethical and legal aspects of critical care medicine.

5. Participate in the resuscitation of patients from shock.


C. Practice Based Learning and Improvement

Goal: The resident will investigate and evaluate his or her own patient care practices, appraise and assimilate scientific evidence, and improve patient care practices.

Objectives:
1. Uses information technology to prepare for surgical cases, bringing to the OR the knowledge of current modalities of care and the scientific evidence for that care.

2. Routinely analyzes the effectiveness of own practices in caring for trauma patients.

3. Improves own practices in the care of trauma patients by integrating appropriately gathered data and feedback.

4. Educates medical students and other healthcare professionals in the practices of trauma surgery.

5. Functions independently with graduated advancement and appropriate faculty supervision.

6. Uses library sources to perform research and perform literature searches.

7. Understands the principles of clinical research and the application of biostatistics.

D. Interpersonal and Communication Skills

Goal: The resident will demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates.

Objectives:
1. Educates patients and families in post operative and rehabilitative strategies for trauma patients.

2. Demonstrates compassion for patients and families afflicted with trauma.

3. Provides adequate counseling and informed consent to patients.

4. Listens to patients and their families.

5. Assimilates data and information provided by other members of the health care team.

6. Charts and records accurate information.

E. System Based Practice

Goal: The resident will demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.
Objectives:

1. Coordinates all aspects of the rehabilitation of the trauma patient.
2. Direct the rehabilitation of patients following trauma by partnering with the following:
   a. Physical Therapy
   b. Occupational Therapy
   c. PRM physicians
   d. social workers
   e. nutritionists
3. Demonstrates knowledge of cost-effective trauma care.
4. Advocates for trauma patients within the health care system.
5. Refers trauma patients to the appropriate practitioners and agencies.
6. Facilitates the timely discharge of trauma patients.
7. Works with paramedical professionals in the prehospital care of trauma patients.

F. Professionalism

Goal: The resident will demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

Objectives:

1. Develops a sensitivity of the unique stresses placed on families under care for traumatic injuries.
2. Exhibits an unselfish regard for the welfare of trauma patients.
3. Demonstrates firm adherence to a code of moral and ethical values.
4. Is respectful to Trauma/ICU patients and their families especially in times of trauma and stress to the family unit.
5. Respects and appropriately integrates other members of the trauma team.
6. Provides appropriately prompt hand consultations when requested.
7. Demonstrates sensitivity to the individual patient's profession, life goals, and cultural background as they apply to trauma care.
8. Is reliable, punctual, and accountable for own actions in the OR and hand clinic.
9. Understands the concepts of autonomy, beneficence, nonmaleficence, justice, and respect for life.
10. Maintains patient confidentiality.

III. Conference Schedule/Format:

1. M&M case presentation: Weekly
2. General surgery grand rounds - Weekly
3. Research conference - Monthly

IV. Method of assessment of resident academic performance

1. Yearly ABSITE examination
2. Monthly written evaluation of resident by faculty
3. Verbal feedback to resident by faculty
4. Stanford GME House staff survey (annual)
5. Program Evaluation (annual)
6. 360 Evaluation
I. Rotation Format:

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II. Goals and Objectives:

A. Medical Knowledge

**Goal:** The resident will achieve a detailed knowledge of the evaluation and treatment of a variety of disease processes. The resident will be exposed to patients with both medical and surgical emergencies and will become comfortable with the initial evaluation and stabilization of patients.

**Objectives:**

1. Discuss the basic pathophysiology of cardiothoracic and pulmonary disease entities.
2. Discuss the indications and contraindications for cardiac surgery.
3. Discuss the diagnosis and treatment of patients undergoing significant cardiovascular events, including:
   a. myocardial infarction
   b. arrhythmias
   c. unstable angina
   d. cardiogenic shock
   e. cerebrovascular accidents
   f. transient ischemic attacks
4. Discuss the physiology and methodology of cardiopulmonary bypass.
5. Discuss the physiology and methodology of ECMO.
6. Discuss the circumstances in which cardiothoracic surgery can be performed off of cardiopulmonary bypass.
7. Recite the basic details of commonly performed cardiac operations, such as:
   a. coronary artery bypass grafting
   b. valve replacement
   c. thoracic aneurysm repair
   d. cardiothoracic transplant
8. Discuss the basic understanding of pacemakers and defibrillating devices.
9. Discuss the pathophysiology and treatment of cardiogenic shock.
10. Recite the indications for and contraindications for cardiothoracic transplantation.
11. Discuss the details of immunotherapy for cardiothoracic transplant surgery.
12. Discuss the diagnosis and treatment of acute and chronic rejection of heart and lung transplants.
13. Recite the details about the process of organ donation.
14. Participate in the care of patients including management of arrhythmias and the anticoagulation of cardiac patients.
15. Discuss the basic pathophysiology of thoracic and pulmonary disease entities.
16. Discuss the indications and contraindications for thoracic surgery.
17. Discuss the diagnosis and treatment of patients undergoing significant thoracic diagnoses, including:
   a. pulmonary malignancies
   b. esophageal malignancies
   c. refractory esophageal reflux
   d. empyemas
   e. pleural effusions
   f. emphysema
18. Recite the basic details of commonly performed thoracic operations, such as:
   a. pulmonary resections
   b. lung transplantation
   c. Nissen Fundoplications
   d. esophageal resection
   e. thymoma
19. Discuss the basic understanding of pacemakers and defibrillating devices.
20. Recite the indications for and contraindications for pulmonary transplantation.
21. Discuss the details of immunotherapy for thoracic transplant surgery.
22. Discuss the diagnosis and treatment of acute and chronic rejection of lung transplants.
23. Recite the details about the process of organ donation.
Discuss the intricacies of mechanical pulmonary ventilation.

Discuss and interpret esophageal manometry, pH studies, spirometry, and measurement of diffusing capacity.

Recite the staging of esophageal and lung malignancies.

Discuss the role and benefits of minimally invasive approach to:

a. Nissen Fundoplications
b. Esophagectomies
c. Lung biopsies
d. Lung resections

B. Patient Care

Goal: The resident will provide patient care that is compassionate, appropriate, and effective for the treatment of cardiothoracic problems.

Objectives

1. Preoperatively evaluate and prepare cardiothoracic patients for surgery.
2. Interprets laboratory and diagnostic tests.
3. Care for patients with post-operative dysrhythmias.
4. Interpret CT Scans of the chest.
5. Interprets electrocardiograms.
6. Care for patients with post-operative hemodynamic problems.
7. Participate in the diagnosis and care of post-operative cardiothoracic complications.
8. Participate in the operative therapy of acquired diseases of the lungs and mediastinum including the use of traditional operative therapy and endoscopic therapy, including:
   a. thoracotomies
   b. thoracostomies
   c. thorascopic and laparoscopic procedures
d. bronchoscopies
e. esophagoscopys

9. Interpret chest xrays and CT scans of thoracic diagnoses.
10. Performs with graduated independent surgical experience the following thoracic surgery procedures:
   a. thoracentesis
   b. insertion of pleural drainage catheters
c. placement of chest tubes
d. bronchoscopy
e. esophagoscopy

C. Practice Based Learning and Improvement

Goal: The resident will investigate and evaluate his or her own patient care practices, appraise and assimilate scientific evidence, and improve patient care practices.

Objectives

1. Uses information technology to prepare for cases, using in the OR the knowledge of current modalities of care and the scientific evidence for that care.
2. Routinely analyzes the effectiveness of own practices in caring for patients.
3. Improves own practices in the care of patients by integrating appropriately gathered data and feedback.
4. Educates medical students and other healthcare professionals in the practices of cardiothoracic medicine.
5. Functions independently with graduated advancement and appropriate faculty supervision.
6. Uses library sources to perform research and perform literature searches.
7. Understands the principles of clinical research and the application of biostatistics.

D. Interpersonal and Communication Skills

Goal: The resident will demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates.

Objectives

1. Educates patients and families in follow-up strategies and rehabilitation for cardiothoracic surgery patients.
2. Demonstrates compassion for patients and families undergoing cardiothoracic surgery and transplantation.
3. Provides adequate counseling and informed consent to patients.
4. Listens to patients and their families.
5. Assimilates data and information provided by other members of the cardiothoracic health care team.
6. Charts and records accurate information.

E. System Based Practice

Goal: The resident will demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

Objectives

1. Coordinates all aspects of the preoperative and postoperative care and rehabilitation of cardiothoracic surgery patients.
2. Create a cost-effective, focused work-up of diagnostic testing.
3. Advocates for cardiac patients within the health care system.
4. Refers cardiothoracic patients to the appropriate practitioners and agencies.
5. Facilitates the timely discharge of cardiothoracic surgery patients.
6. Learn to coordinate the admission of patients and communicate with primary care physicians, inpatient house staff, and consultants.

F. Professionalism

Goal: The resident will demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

Objectives

1. Develops a sensitivity of the unique stresses placed on families under care for cardiothoracic surgery.
2. Exhibits an unselfish regard for the welfare of cardiac surgery patients.
3. Demonstrates firm adherence to a code of moral and ethical values.
4. Is respectful to patients and their families especially in times of stress to the family unit.
5. Respects and appropriately integrates other members of the cardiac health care team.
6. Provides appropriately prompt hand consultations when requested.
7. Demonstrates sensitivity to the individual patient’s profession, life goals, and cultural background as they apply to surgery.
8. Is reliable, punctual, and accountable for own actions in the OR and clinic.
9. Understands the concepts of autonomy, beneficence, nonmaleficence, justice, and respect for life.
10. Maintains patient confidentiality.

References:

III. Conference Schedule/Format:
1. Stanford Monday morning conference held at 7:00 am on the first, second and fourth week.
2. Stanford mortality and morbidity conference held on Monday at 7:00 am on the third week.
3. Pulmonary/thoracic conference held on Thursday at 4:00 pm on the third week.

IV. Method of assessment of resident academic performance
1. Monthly written evaluation by faculty.
2. Verbal feedback to resident by faculty.
3. ABSITE yearly examination.
4. Stanford GME House staff survey (annual)
5. Program Evaluation (annual)
I. Rotation Format:

<table>
<thead>
<tr>
<th>Rotation: Critical Care Medicine</th>
<th>Rotation Duration: 1 Month(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution: VA Palo Alto Health Care</td>
<td>Call responsibility (q): Q3 Night(s) X In House Home</td>
</tr>
<tr>
<td>Responsible faculty member: Dr. J. Barr/W. Kuschner</td>
<td>Training Level: 1 X 2 3</td>
</tr>
</tbody>
</table>

II. Goals and Objectives:

**Goal:** To understand the management of patients in the ICU

**A. Medical Knowledge**

<table>
<thead>
<tr>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Discuss the fundamental concepts of critically ill patient care.</td>
</tr>
<tr>
<td>2. Describe the physiological parameters of critical illness.</td>
</tr>
<tr>
<td>3. Interpret physiologic patient data.</td>
</tr>
<tr>
<td>4. Provide a differential diagnosis, develop diagnostic strategies, and evaluate therapeutic interventions.</td>
</tr>
<tr>
<td>5. Discuss the collaborative practice style of ICU care setting.</td>
</tr>
<tr>
<td>6. List the physiology, pathophysiology, and treatment of the various kinds of shock, including:</td>
</tr>
<tr>
<td>a. hypovolemic</td>
</tr>
<tr>
<td>b. cardiogenic</td>
</tr>
<tr>
<td>c. septic</td>
</tr>
<tr>
<td>d. distributive</td>
</tr>
<tr>
<td>e. obstructive</td>
</tr>
<tr>
<td>7. Discuss the common cardiopulmonary pathophysiology encountered in the ICU, including:</td>
</tr>
<tr>
<td>a. myocardial infarction and cardiac dysrhythmias</td>
</tr>
<tr>
<td>b. ARDS</td>
</tr>
<tr>
<td>c. pulmonary embolism</td>
</tr>
<tr>
<td>d. pneumonia</td>
</tr>
<tr>
<td>e. acute pericardial disease</td>
</tr>
<tr>
<td>8. Discuss the common renal pathophysiology encountered in the ICU, including:</td>
</tr>
<tr>
<td>a. acute and chronic renal failure</td>
</tr>
<tr>
<td>b. volume, osmolality, electrolyte derangements</td>
</tr>
<tr>
<td>c. acid-base disorders</td>
</tr>
<tr>
<td>d. hemodialysis and peritoneal dialysis</td>
</tr>
<tr>
<td>9. Discuss the common infectious pathophysiology encountered in the ICU, including:</td>
</tr>
<tr>
<td>a. antimicrobial agents</td>
</tr>
<tr>
<td>b. infection control</td>
</tr>
<tr>
<td>c. severe infections</td>
</tr>
<tr>
<td>d. sepsis and septic shock</td>
</tr>
<tr>
<td>e. immunocompromised hosts</td>
</tr>
<tr>
<td>f. hospital acquired and opportunistic infections</td>
</tr>
<tr>
<td>10. List the common medications used in the ICU setting and their:</td>
</tr>
<tr>
<td>a. pharmacokinetics</td>
</tr>
<tr>
<td>b. dynamics</td>
</tr>
<tr>
<td>c. metabolisms</td>
</tr>
<tr>
<td>d. toxicity</td>
</tr>
<tr>
<td>e. excretion</td>
</tr>
</tbody>
</table>

**B. Patient Care**

<table>
<thead>
<tr>
<th>Objective</th>
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</thead>
<tbody>
<tr>
<td>1. Demonstrate proficiency in ICU procedures, including:</td>
</tr>
<tr>
<td>a. awake and urgent intubations</td>
</tr>
<tr>
<td>b. central venous access</td>
</tr>
<tr>
<td>c. pulmonary artery catheter placement</td>
</tr>
<tr>
<td>d. arterial catheter placement</td>
</tr>
<tr>
<td>2. Manage mechanical ventilation, including:</td>
</tr>
<tr>
<td>a. pressure ventilation</td>
</tr>
<tr>
<td>b. volume ventilation</td>
</tr>
<tr>
<td>c. cPAP</td>
</tr>
</tbody>
</table>
d. PEEP
e. intermittent mandatory ventilation

3. Participate in the monitoring, bioengineering, and biostatistics in the ICU, including:
   a. prognostic indices and severity codes
   b. invasive cardiac monitoring
   c. noninvasive cardiac monitoring (EKG, echo)
   d. brain monitoring (ICP, CPP)
   e. respiratory monitoring
   f. metabolic monitoring (O2 consumption, CO2 production)

4. Engage in the ethical and legal aspects of critical care medicine.

5. Participate in the resuscitation of patients from shock.


C. Practice-Based Learning and Improvement

Goal: The resident will investigate and evaluate his or her own patient care practices, appraise and assimilate scientific evidence, and improve patient care practices.

Objectives:
1. Uses information technology to prepare for cases, bringing to the ICU the knowledge of current modalities of care and the scientific evidence for that care.
2. Routinely analyzes the effectiveness of own practices in caring for ICU patients.
3. Improves own practices in the care of patients by integrating appropriately gathered data and feedback.
4. Educates medical students and other healthcare professionals in the practices of critical care medicine.
5. Functions independently with graduated advancement and appropriate faculty supervision.
6. Uses library sources to perform research and perform literature searches.

D. Interpersonal and Communication Skills

Goal: The resident will demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates.

Objectives:
1. Educates patients and families in critical care medicine.
2. Demonstrates compassion for patients and families.
3. Provides adequate counseling and informed consent to patients.
4. Listens to patients and their families.
5. Assimilates data and information provided by other members of the health care team.
6. Charts and records accurate information.

E. System-Based Practice

Goal: The resident will demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

Objectives:
1. Coordinates the care of patients in the ICU who are critically ill.
2. Demonstrates knowledge of cost-effective critical care medicine.
3. Advocates for patients within the health care system.
4. Refers patients to the appropriate practitioners and agencies.
5. Facilitates the timely discharge and/or placement of critical care patients.
6. Understands general practice and method of billing with insurance in the ICU.

F. Professionalism

Goal: The resident will demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

Objectives:
1. Develops a sensitivity of the unique stresses placed on families with members in the ICU.
2. Exhibits an unselfish regard for the welfare of ICU patients.
3. Demonstrates firm adherence to a code of moral and ethical values.
4. Is respectful to patients and their families especially in times of stress to the family unit.
5. Respects and appropriately integrates other members of the health care team.
6. Provides appropriately prompt hand consultations when requested.
7. Demonstrates sensitivity to the individual patient’s profession, life goals, and cultural background as they apply to health care.
8. Is reliable, punctual, and accountable for own actions in the ICU.
9. Understands the concepts of autonomy, beneficence, nonmaleficence, justice, and respect for life.
10. Maintains patient confidentiality.
11. Discuss the ethical issues confronted in the ICU, and summarize the approach to complex issues, particularly in the withdrawal of life support.

References:
Handbook of ICU Therapy by Ian McConachie (Paperback - Feb 6, 2006)
### III. Conference Schedule/Format:

1. Daily 1 hour 11am-12pm ICU lectures  
2. Daily morning and afternoon teaching rounds  
3. Daily radiology rounds

### IV. Method of assessment of resident academic performance

1. Monthly written evaluation of resident by faculty  
2. Verbal feedback to resident by faculty  
3. Stanford GME House staff survey (annual)  
4. Program Evaluation (annual)  
5. In-service Examination
### Objectives

#### Goal

<table>
<thead>
<tr>
<th>V.  Endocrine Surgery</th>
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<tbody>
<tr>
<td><strong>Objectives</strong></td>
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<tr>
<td><strong>Goal</strong></td>
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#### IV. Minimal Access Surgery

<table>
<thead>
<tr>
<th>Objectives</th>
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<tr>
<td><strong>Goal</strong></td>
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#### I. Surgical Oncology

<table>
<thead>
<tr>
<th>Objectives</th>
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<tbody>
<tr>
<td><strong>Goal</strong></td>
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</tbody>
</table>

1. Discuss the basic pathophysiology of the mechanisms involved in malignant transformation, tumor growth, and metastases formation.
2. Discuss the treatment of malignant melanoma, including:
   a. staging of malignant melanoma.
   b. indications for operative management of melanoma and the selection of appropriate surgical procedures.
   c. adjuvant treatment regimens and indication for their use in patients with melanoma.
   d. treatment of advanced melanoma.
3. Recite the natural history and biologic behavior of specific tumor types, including:
   a. breast cancer, colorectal cancer, upper GI malignancies, melanoma, sarcoma
4. Recite the details of the management of wound care in the surgical oncology patient.
5. Discuss the details of the use/dosing of chemotherapy in surgical oncology patients.

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#### II. Gastrointestinal Surgery

<table>
<thead>
<tr>
<th>Objectives</th>
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<tr>
<td><strong>Goal</strong></td>
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</table>

1. Discuss the evaluation, diagnosis, and management of the acute abdomen.
2. Discuss the evaluation, diagnosis, and surgical management of the stomach and duodenum, including:
   a. benign stomach tumors, gastritis and upper GI bleeds, malignancies of the stomach and duodenum
3. Discuss the evaluation, diagnosis, and surgical management of the small intestines, including:
   a. intestinal obstruction, regional enteritis/Crohn's Disease, Meckel's diverticulum, carcinoid tumors, appendicitis
4. Discuss the evaluation, diagnosis, and surgical management of the colon, including:
   a. diverticulitis, benign and malignant neoplasms of the large intestine, ulcerative colitis, constipation, benign and malignant neoplasms of the rectum, perirectal abscess, pilonidal disease, hemorrhoids, anal fissures, Crohn's disease, intestinal ischemia, inflammatory bowel disease
5. Discuss the evaluation, diagnosis, and surgical management of the pancreato-biliary system, including:
   a. acute cholecystitis, chronic cholecystitis and cholelithiasis, cholangitis, gallstone ileus and fistula, gallbladder carcinoma, acute and chronic pancreatitis, pseudocyst, pancreatic neoplasms, endocrine tumors, hepatocellular carcinoma, metastases of the liver

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#### III. Breast Surgery

<table>
<thead>
<tr>
<th>Objectives</th>
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<tbody>
<tr>
<td><strong>Goal</strong></td>
</tr>
</tbody>
</table>

1. Discuss the evaluation, diagnosis, and surgical care of a breast mass.
2. Describe the evaluation of non-palpable breast abnormalities.
3. Discuss the appropriate use of mammography, ultrasound, fine needle aspiration, and stereotactic biopsies.
4. Discuss the preoperative staging of breast cancer.
5. Recite the use of preoperative chemotherapy and radiation therapy for breast cancer.
6. Describe the indication for operative management of breast disease, and selection of appropriate surgical procedures.
7. Discuss the adjuvant treatment regimens and indications for their use in breast cancer.
8. Describe the treatment of advanced breast cancer.
9. Recite the screening for breast cancer.
10. Discuss the genetic predisposition to breast cancer and prophylactic mastectomy.

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#### IV. Minimal Access Surgery

<table>
<thead>
<tr>
<th>Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal</strong></td>
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</tbody>
</table>

1. Discuss the advantages and disadvantages of minimally invasive surgery.
2. Recite the physiologic effects of pneumoperitoneum, including:
   a. acidosis, cardiovascular changes, urine output, pulmonary, air embolism, deep venous thrombosis
3. Discuss the basic equipment necessary for laparoscopic equipment.
4. Discuss the suitability of minimally invasive surgery for various disease processes.

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#### V. Endocrine Surgery

<table>
<thead>
<tr>
<th>Objectives</th>
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<tbody>
<tr>
<td><strong>Goal</strong></td>
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</tbody>
</table>

1. Discuss the evaluation, diagnosis, and management of surgical endocrine disease, including:
   a. hot and cold thyroid nodules, adrenal masses and pheochromocytomas, primary, secondary and tertiary, hyperparathyroidism, pancreatic islet tumors, inherited endocrine tumor syndromes, thyroid malignancies,
VI. TRAUMA

A. Medical Knowledge

Goal: The resident will achieve a detailed knowledge of the pathophysiology of blunt and penetrating trauma and will develop the skills needed to treat the trauma patient.

Objectives:
1. Discuss the mechanisms of injury of blunt and penetrating injury.
2. Recite the steps of the primary, secondary, and tertiary surgery.
3. Discuss the diagnosis and treatment of thoracic injuries, including:
   a. Flail chest, Cardiac tamponade and contusion, Open and tension pneumothorax, Airway obstruction, Aortic transaction, Diaphragmatic tear, Esophageal tear, Rib fracture
4. Discuss the diagnosis and treatment of abdominal injuries, including:
   a. Splenic injury, hepatic injury, bowel injury, gastric injury, pancreatic injury, renal and bladder injury
5. Discuss the diagnosis and treatment of central nervous system injury:
   a. Brain injury, spinal cord injury
6. Discuss the diagnosis and treatment of orthopaedic injuries.
7. Recites the steps in the treatment of hemorrhagic shock.

B. Patient Care

Goal: The resident will provide patient care that is compassionate, appropriate, and effective for the treatment of cardiothoracic problems.

Objectives:
1. Preoperatively evaluate the fitness of a patient for surgery, including cardiac screening, nutritional status, etc.
2. Interprets laboratory and diagnostic tests.
3. Gradually acquire the basic operative skills, including:
   a. Incision of tissues, suturing techniques, knot tying, gentle handling of tissues, wound closure, dressings
4. Postoperatively manage and care for surgical patients.
5. Participate, with graduated independence, in basic general surgery procedures with, including:
   a. Placement of central venous catheters, proctoscopies, lymph node biopsies, G and J-tube insertions, drainage of abscesses, intubotomies and sphincterotomies, hernia repairs, tracheostomies
6. Participates, with graduated surgical independence, in general surgery procedures, including:
   a. Bowel resections, lysis of adhesions, formation of stomas, splenectomies, cholecystectomies, gastric resections, pancreatic resections, liver resections and biliary reconstructions
7. Care for ICU patients with post-operative hemodynamic problems.
8. Participate in the diagnosis and care of patients with post-operative complications in general surgery.
9. Participate in preoperative preparation for surgery including bowel preps, antibiotic prophylaxis, DVT prophylaxis, fluid therapy, dietary management, etc.
10. Perform bedside procedures with graduated surgical independence, including:
    a. Wound care
    b. Drain care
    c. Feeding tube placement and care
    d. Placement and care of central lines
    e. Pleural catheters
    f. Nasogastric tubes
    g. Foley catheters
11. Prepare and position patients for minimally invasive surgery.
12. Manage intraoperative and postoperative complications of minimally invasive surgery.
13. Participate in minimally invasive surgery, mastering techniques, including:
    a. Maneuvering an angled laparoscope, intracorporeal knot-tying, closing port sites, endoscopic stapling, harmonic scalpel use, placement of endoscopic loop, bimanual dexterity
14. Participate with graduated surgical independence in endocrine surgery, including:
    a. Thyroid lobectomies, thyroidectomies, parathyroid adenoma, open and laparoscopic adrenalectomy
15. Participate with graduated surgical independence in breast cancer surgery, including:
    a. Segmental mastectomy, simple or modified radical mastectomy, axillary dissection, sentinel node mapping and sampling, reconstruction after mastectomy
16. Participate with graduated surgical independence in the treatment of malignant melanoma, including:
    a. Evaluation of suspicious skin lesions, wide local excision, sentinel node mapping, regional lymph node, dissections, treatment of advanced melanoma (isolated limb perfusion)

C. Practice Based Learning and Improvement

Goal: The resident will investigate and evaluate his or her own patient care practices, appraise and assimilate scientific evidence, and improve patient care practices.

Objectives:
1. Uses information technology to prepare for cases, using in the OR the knowledge of current modalities of care and the scientific evidence for that care.
2. Routinely analyzes the effectiveness of own practices in caring for surgery patients.
3. Improves own practices in the care of patients by integrating appropriately gathered data and feedback.
4. Educates medical students and other healthcare professionals in the practices of general surgery.
5. Functions independently with graduated advancement and appropriate faculty supervision.
6. Uses library sources to perform research and perform literature searches.
7. Understands the principles of clinical research and the application of biostatistics.
D. Interpersonal and Communication Skills

Goal: The resident will demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates.

Objectives:
1. Educates patients and families in follow-up strategies and rehabilitation for general surgery patients.
2. Demonstrates compassion for surgical oncology patients and families.
3. Provides adequate counseling and informed consent to patients.
4. Listens to patients and their families.
5. Assimilates data and information provided by other members of the general surgery health care team.
6. Charts and records accurate information.

E. System Based Practice

Goal: The resident will demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

Objectives:
1. Coordinates all aspects of the preoperative and postoperative care and rehabilitation surgical oncology patients.
2. Create a cost-effective, focused work-up of diagnostic testing.
3. Advocates for surgical patients within the health care system, specifically at the county hospital for the uninsured indigent population.
4. Refers surgical patients to the appropriate practitioners and agencies.
5. Facilitates the timely discharge and/or placement of surgery patients.
6. Learn to coordinate the admission of patients and communicate with primary care physicians, inpatient house staff, and consultants.
7. Discuss the scientific basis and regulations governing clinical trials and their importance in defining appropriate cancer therapy.
8. Coordinates the total care of the surgical oncology patient by partnering with other members of the oncology team, including:
   a. medical oncologists
   b. radiation oncologists
   c. social workers
   d. pastoral care
   e. hospice
   f. cancer researchers

F. Professionalism

Goal: The resident will demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

Objectives:
1. Develops a sensitivity of the unique stresses placed on families under care for general surgery.
2. Exhibits an unselfish regard for the welfare of general surgery patients.
3. Demonstrates firm adherence to a code of moral and ethical values.
4. Is respectful to patients and their families especially in times of stress to the family unit.
5. Respects and appropriately integrates other members of the general surgery health care team.
6. Provides appropriately prompt consultations when requested.
7. Demonstrates sensitivity to the individual patient’s profession, life goals, and cultural background as they apply to surgery.
8. Is reliable, punctual, and accountable for own actions in the OR and clinic.
9. Understands the concepts of autonomy, beneficence, nonmaleficence, justice, and respect for life.
10. Maintains patient confidentiality.

References:
Farquharson's Textbook of Operative General Surgery (Hodder Arnold Publication) by Margaret Farquharson and Brendan Moran (2005)
### III. Conference Schedule/Format:

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>6:30 am</td>
<td>Ward rounds</td>
</tr>
<tr>
<td></td>
<td>8:00</td>
<td>Resident conference</td>
</tr>
<tr>
<td></td>
<td>8:30</td>
<td>OR (3 rooms)</td>
</tr>
<tr>
<td>Tuesday</td>
<td>6:30 am</td>
<td>Ward rounds</td>
</tr>
<tr>
<td></td>
<td>8:00</td>
<td>Teaching conference</td>
</tr>
<tr>
<td></td>
<td>9:00</td>
<td>Case Review and morbidity</td>
</tr>
<tr>
<td></td>
<td>10:30</td>
<td>Radiology conference--x-ray department</td>
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<tr>
<td></td>
<td>11:00</td>
<td>Pathology conference--pathology library</td>
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<td></td>
<td>12:00 pm</td>
<td>Department of Medicine conference</td>
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<tr>
<td></td>
<td>1:00 pm</td>
<td>Surgery clinic</td>
</tr>
<tr>
<td>Wednesday</td>
<td>7:30</td>
<td>OR</td>
</tr>
<tr>
<td></td>
<td>9:00</td>
<td>Surgery clinic</td>
</tr>
<tr>
<td></td>
<td>1:00 pm</td>
<td>Tumor Board</td>
</tr>
<tr>
<td>Thursday</td>
<td>6:30 am</td>
<td>Ward rounds</td>
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<tr>
<td></td>
<td>7:30</td>
<td>OR</td>
</tr>
<tr>
<td></td>
<td>9:00</td>
<td>Colon &amp; Rectal (Proctology) Clinic</td>
</tr>
<tr>
<td>Friday</td>
<td>6:30 am</td>
<td>Ward Rounds</td>
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<tr>
<td></td>
<td>7:30</td>
<td>OR</td>
</tr>
<tr>
<td></td>
<td>1:00 pm</td>
<td>Surgery Clinic</td>
</tr>
<tr>
<td>Saturday</td>
<td>6:00 am</td>
<td>Ward Rounds</td>
</tr>
</tbody>
</table>

### IV. Method of assessment of resident academic performance

1. Quarterly written evaluation of resident by faculty
2. Verbal feedback to resident by faculty
3. ABSITE examination
4. Stanford GME House staff survey (annual)
5. Program Evaluation (annual)
6. 360 Evaluation
### I. Rotation Format:

<table>
<thead>
<tr>
<th>Rotation</th>
<th>Plastic Surgery</th>
<th>Rotation Duration:</th>
<th>1</th>
<th>Month(s)</th>
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</thead>
<tbody>
<tr>
<td>Institution</td>
<td>Valley Medical Center</td>
<td>Call responsibility (q):</td>
<td>Q2</td>
<td>Night(s)</td>
</tr>
<tr>
<td>Responsible faculty member: (CV attached):</td>
<td>Dr. Y. Karanas</td>
<td>Training Level:</td>
<td>1</td>
<td>X</td>
</tr>
</tbody>
</table>

### II. Goals and Objectives:

#### A. Medical Knowledge

**I: Wound Repair: Principles and Applications**

**Goal:** The resident will demonstrate knowledge of the physiology and biochemistry of wound healing and manage complex wounds using a variety of techniques to achieve normal healing and maximum aesthetic benefit.

**Objectives:**

1. Recite the physiology and biochemistry of normal healing.
2. Discuss the physiology and biochemistry of abnormal wound healing including hypertrophic scars and keloids.
3. Discuss common agents and processes which result in abnormal healing.
4. Identify the pharmacologic agents and other nonsurgical methods for treatment of abnormal healing.
5. Describe the management of dressings, splints and other techniques utilized in wound management.
6. Explain the differences in the healing of cortical and cancellous, membranous and endochondral bone.
7. Draw and plan techniques of scar revision (such as Z-plasty and W-plasty).
8. Describe the various lines of the skin (such as relaxed skin tension) and their importance in placement of incisions for maximum aesthetic result.
9. Discuss the role of nutrition in the wound healing process and the standard methods for diagnosis and treatment of nutritional deficiencies.
10. Discriminate the pathologic processes involved in keloid formation and the methods available to treat keloids.
11. Understand the differences in suture materials and indications for the use of different materials.
12. Discuss the basic science of healing, including the anatomy, physiology, biochemistry, microbiology, immunology, wound healing for:
   a. skin and soft tissue
   b. tendon
   c. bone (different types)
   d. nerve
   e. cartilage.
13. Discuss abnormal wound healing, including:
   b. excessive healing (hypertrophic scars and keloids).

#### II: Flaps and Grafts

**Goal:** The resident will demonstrate knowledge of the physiology and flaps and grafts, will be familiar with surgery in all types of flaps and grafts, and will utilize these effectively in the full spectrum of plastic surgical practice.

**Objectives:**

1. Discuss the terminology of flap movement including advancement flap, rotation flap, transposition of flap, etc.
2. Recite the terminology of flap vascular supply including random flap, island flap, free flap, etc.
3. Identify the variations in flap anatomy including cutaneous flap, fasciocutaneous flap, musculocutaneous flap, etc.
4. Explain the physiology of normal flaps, ischemic flaps, and the "delay" phenomenon.
5. Discuss the pathophysiology and microbiology of acute, intermediate, and secondary wounds, and the impact this has for the timing and techniques of wound closure surgery; be thoroughly familiar with the factors influencing the choice of flap versus graft for wound closure.
6. Explain in detail the specific physiology of split and full thickness skin grafts, dermal grafts, cartilage grafts, bone grafts, tendon grafts, nerve grafts, fascial grafts, and composite grafts.
7. Explain the differences in first degree and second degree wound contraction versus contracture.
8. Explain the concept of dermatomes and angiosomes and their implications on wounds and flaps.
9. Discern the principles and applications of special grafting techniques including dembrasion and over-grafting, the crane principle, xenografts, skin matrix and synthetic or chemically manipulated materials.
10. Recite the Mathieu Classification of muscle flaps.
11. Discuss the technological, pharmacological, and physiological monitoring techniques including fluorescence, capillary refill, thermal monitoring, laser flow probes, oxygen saturation, pH monitoring, etc.
III. Facial Trauma

Goal: The resident will be familiar with the mechanisms of traumatic head and neck injuries, understand the diagnostic techniques and therapeutic options for such problems, and perform complete management of traumatic injuries of the head and neck.

Objectives:

1. Describe the priorities involved in treating patients with head and neck injuries.
2. Describe the mechanical and structural properties of the facial skeleton as they relate to fracture patterns in facial trauma.
3. Discuss the advantages and disadvantages of various techniques of treatment of facial fractures including:
   a. nonoperative treatment, closed reduction, mandibulomaxillary fixation, open reduction with and without fixations, intraoral splints, external fixation, bone grafting.
4. Describe the treatment of facial fracture complications including:
   a. secondary deformities, infections and osteomyelitis, malocclusion, nonunions, malunions.
5. Describe the neuroanatomy, cranial nerve anatomy and soft tissue anatomy pertinent to facial fractures.
6. Recite the treatment of soft tissue injuries of the head and face including:
   a. parotid gland and duct, facial nerve, lacrimal apparatus.
7. Describe the evaluation and treatment of secondary deformities of fracture facial including:
   a. malocclusion, enophthalmos, frontal sinus mucoceles, facial nerve paralysis, soft tissue contractures.
8. Discuss the principles of care and the surgical steps in the treatment of the following facial fractures:
   a. frontal sinus, naso-orbital ethmoid, orbital, zygomatic, nasal, maxillary, mandibular, pan-facial.

B. Patient Care

Goal: The resident will provide patient care that is compassionate, appropriate, and effective.

Objectives:

1. Participate in the care and treatment of scars and keloids, including:
   a. surgical techniques (Z-plasty, W-plasty, etc)
   b. nonsurgical techniques
   c. camouflage techniques
2. Evaluate patients and their nutritional status as related to wound healing, including:
   a. diagnosis of deficiency
   b. treatment of deficiency
3. Participate in planning surgical incisions, with respect to:
   a. selection in relation to skin lines
   b. techniques for closure
   c. suture materials – types and uses
4. Participate in wound management, including:
   a. debridement
   b. use of splints, dressings, casts, topical agents
   c. use of biologic substitutes
5. Treat complex wound problems such as dehiscence, delayed healing of complex traumatic wounds.
6. Evaluate patients with scar problems and revise scars to achieve functional and aesthetic benefit.
7. Perform surgical and pharmacologic treatment of hypertrophic scars and keloids.
8. Utilize splints, casts, dressings, topical agents, etc., to optimize healing.
9. Place incisions for elective surgery in such a way as to achieve the greatest aesthetic benefit.
10. Utilize biologic and artificial skin substitutes in wound management.
11. Participate in the surgery of grafts and flaps including: skin, dermis, cartilage, bone, tendon, muscle, fascia, combined tissue; specifically:
   a. grafting techniques
   b. instruments for harvesting grafts
   c. graft preservation techniques
   d. donor site management
   e. recipient site management
   f. special techniques
   g. xenografts
12. Prepare methyl methacrylate prostheses.
13. Perform surgical procedures using solid implant materials including:
   a. silicone implantation to breasts, orbital floor, malar area, chin or joints.
   b. non-vascularized bone grafts for a variety of defects.
14. Perform soft tissue augmentation using injectable material.
15. Evaluate and treat patients with localized lipodystrophy, using suction lipectomy techniques.
16. Participate in the evaluation and treatment of patients with a wide variety of congenital and acquired defects using tissue expansion techniques.
17. Evaluate and treat patients using dermabrasion and/or chemical peel.
18. Participate in obtaining informed consent from patients; effectively documenting that agreement.
19. Contribute effectively and accurately to the medical record of both inpatients and outpatients.
20. Treat patients with physical deformities and explore the psychological aspects of their care.
23. Participate in the management of problem patients, including angry patients, dissatisfied patients, “doctor shoppers”, “drug seekers”, etc.
24. Participate in the management of critically ill patients in the surgical intensive care unit.
25. Participate in the critical care management/emergency management of burn and trauma patients, including:
   a. initial care
   b. diagnosis
   c. preparation for the operating room
   d. postoperative care
26. Participate in the care of surgical patients with complications including:
   a. respiratory failure
   b. cardiovascular problems (arrhythmia, DVT, PE)
   c. sepsis
   d. bleeding
   e. hematoma
27. Participate in the management of patients with autoimmune and collagen vascular diseases such as lupus erythematosus.
28. Identify patients who are at risk for malignancy because of their immunosuppressed condition and provides screening and education to these patients.
29. Identify and treat patients whose condition warrants allografting (e.g., large body surface burn).
30. Perform pre- and postoperative management of immunosuppressed patients undergoing plastic surgical procedures.
31. Diagnose and treat patients with surgical wound infections.
32. Evaluate and treat patients with infections of the head and neck, breast, skin and hand.
33. Prescribe analgesics for postoperative care and for pain management.
34. Utilize steroids for treatment of a variety of plastic surgical problems and in the postoperative care of steroid-dependent patients.
35. Particiate in the management of patients undergoing chemotherapy for head and neck and/or skin malignancies.
36. Manage patients with localized extravasation injuries.
37. Participate in outpatient management including both a clinic experience in which the resident has independent responsibility and an observation of faculty managing private patients including initial consultation and management of complications.
38. Code diagnoses by the ICD-9 system.
39. Code procedures by the CPT system.
40. Photograph his/her own patients with a standardized format.
41. Attend risk management seminar or studies risk management techniques and discuss principles with faculty; apply these principles in daily practice of plastic surgery.
42. Perform a comprehensive head and neck exam followed by facial form analysis.
43. Utilize radiographic and special diagnostic studies to evaluate head and neck anomalies.
44. Interpret radiographic diagnostic studies including panorex films, cephalograms, CT/3D CT scans, MR imaging, and angiography with respect to the head and neck trauma patient.
45. Perform the staged management of devastating open facial injuries including wound care, debridement and reconstruction.
46. Perform surgical procedures of facial fracture management including:
   a. maxillary
   b. mandibular
   c. orbital
   d. frontal sinus
   e. zygomatic
   f. zygomatic arch
   g. nasal
   h. panfacial
47. Perform all surgical techniques of access to the craniofacial skeleton.
48. Perform a comprehensive examination of the facial nerve.
49. Perform acute repair of soft tissue facial trauma.
50. Perform secondary scar revision from facial trauma.
51. Perform primary facial nerve repair, and associated procedures (i.e. global weight, static, and dynamic reconstruction) for the patient with facial paralysis.

C. Practice Based Learning and Improvement

**Goal:** The resident will investigate and evaluate his or her own patient care practices, appraise and assimilate scientific evidence, and improved patient care practices.

**Objectives:**

1. Use information technology to prepare for surgical cases, bringing to the OR the knowledge of current modalities of care for patients and the scientific evidence for that care.
2. Routinely analyzes the effectiveness of own practices in caring for patients.
3. Improve own practices in the care of patients by integrating appropriately gathered data and feedback.
4. Educate medical students and other healthcare professional in the practices of surgical patients.
5. Function independently with graduated advancement and appropriate faculty supervision in the evaluation and treatment of patients.
D. Interpersonal and Communication Skills

Goal: The resident will demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates.

Objectives:
1. Educate patients and families in pre- and post-operative care of surgical patients.
2. Demonstrate compassion for patients and families with traumatic and acquired anomalies.
3. Provide adequate counseling and informed consent to patients.
4. Listen to patients and their families.
5. Assimilate data and information provided by other members of the health care team.
6. Effectively obtain informed consent from patients.

E. System Based Practice

Goal: The resident will demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

Objectives:
1. Function within the organization of specialty clinics including the coordination of all special services in the evaluation of patients.
2. Participate in tumor-board conference.
3. Participates in multidisciplinary planning and treatment for patients with complex diagnoses.
4. Direct the overall care of patients with complicated wounds by partnering with the following:
   a. nutritionists
   b. wound care specialists
   c. occupational and physical therapists
5. Demonstrate knowledge of cost-effective surgical care.
6. Advocate for patients within the health care and insurance system.

F. Professionalism

Goal: The resident will demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

Objectives:
1. Develop a sensitivity of the unique stress placed on families under care for surgery.
2. Exhibit an unselfish regard for the welfare of patients.
3. Demonstrate firm adherence to a code of moral and ethical values.
4. Be respectful to patients and their families especially in times of trauma and stress to the family unit.
5. Respect and appropriately integrate other members of the healthcare team.
6. Provide appropriately prompt consultations when requested.
7. Demonstrate sensitivity to the individual patient’s profession, life goals, and cultural background as they apply to their surgical diagnosis.
8. Be reliable, punctual, and accountable for own actions in the OR and clinic.
9. Accurately and honestly council patients regarding risks and complications of breast implant surgery.
10. Effectively deal with dissatisfied patients.
11. Understand the physician/patient relationship.
12. Professionally and ethically perform CPT coding.
13. Understand the benefits and functionality of multidisciplinary health care teams.
14. Refer patients to the appropriate practitioners and agencies.
15. Facilitate the timely discharge of patients.

References:
Key Notes on Plastic Surgery by Adrian Richards (2002)

III. Conference Schedule/Format:

1. Stanford Plastic Surgery Lecture Series
2. Teaching rounds at SCVMC

<table>
<thead>
<tr>
<th>Time</th>
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| Tuesday     | 4:30 pm – 6:45pm
| Wednesday   | 8:30 am -11:30am

Weekly

IV. Method of assessment of resident academic performance

1. Written evaluation of resident by faculty at completion to rotation
2. Verbal feedback to resident by faculty
3. Stanford GME House staff survey (annual)
4. Program Evaluation (annual)
5. In-service Examination
6. 360 Evaluation
I. Rotation Format:

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<tr>
<th>Rotation:</th>
<th>General Surgery</th>
<th>Rotation Duration:</th>
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<td>Dr. R. Ilano/ L. Kim</td>
<td>Training Level:</td>
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II. Goals and Objectives:

A. Medical Knowledge

I. Surgical Oncology

Goal: The resident will achieve a detailed knowledge of the evaluation and management of surgical oncology patients.

Objectives:

1. Discuss the basic pathophysiology of the mechanisms involved in malignant transformation, tumor growth, and metastases formation.
2. Discuss the treatment of malignant melanoma, including:
   a. staging of malignant melanoma
   b. indications for operative management of melanoma and the selection of appropriate surgical procedures.
   c. adjuvant treatment regimens and indication for their use in patients with melanoma.
   d. treatment of advanced melanoma.
3. Recite the natural history and biologic behavior of specific tumor types, including:
   a. breast cancer
   b. colorectal cancer
   c. upper GI malignancies
   d. melanoma
   e. sarcoma
4. Recite the details of the management of wound care in the surgical oncology patient.
5. Discuss the details of the use/dosing of chemotherapy in surgical oncology patients.

II. Gastrointestinal Surgery

Goal: The resident will achieve a detailed knowledge of the evaluation and management of the general GI surgical patient.

Objectives:

1. Discuss the evaluation, diagnosis, and management of the acute abdomen.
2. Discuss the evaluation, diagnosis, and surgical management of the stomach and duodenum, including:
   a. benign stomach tumors
   b. gastritis and upper GI bleeds
   c. malignancies of the stomach and duodenum
3. Discuss the evaluation, diagnosis, and surgical management of the small intestines, including:
   a. intestinal obstruction
   b. regional enteritis/Crohn’s Disease
   c. Meckel’s diverticulum
   d. carcinoid tumors
   e. appendicitis
4. Discuss the evaluation, diagnosis, and surgical management of the colon, including:
   a. diverticulitis
   b. benign and malignant neoplasms of the large intestine
   c. ulcerative colitis
   d. constipation
   e. benign and malignant neoplasms of the rectum
   f. perirectal abscess
   g. pilonidal disease
   h. hemorrhoids
   i. anal fissures
   j. Crohn’s disease
   k. intestinal ischemia
   l. inflammatory bowel disease
5. Discuss the evaluation, diagnosis, and surgical management of the pancreato-biliary system, including:
   a. acute cholecystitis
   b. chronic cholecystitis and cholelithiasis
   c. cholangitis
   d. gallstone ileus and fistula
   e. gallbladder carcinoma
III. Breast Surgery

**Goal:** The resident will achieve a detailed knowledge of the evaluation and management of the breast patient.

**Objectives:**
1. Discuss the evaluation, diagnosis, and surgical care of a breast mass.
2. Describe the evaluation of non-palpable breast abnormalities.
3. Discuss the appropriate use of mammography, ultrasound, fine needle aspiration, and stereotactic biopsies.
4. Discuss the preoperative staging of breast cancer.
5. Recite the use of preoperative chemotherapy and radiation therapy for breast cancer.
6. Describe the indication for operative management of breast disease, and selection of appropriate surgical procedures.
7. Discuss the adjuvant treatment regimens and indications for their use in breast cancer.
8. Describe the treatment of advanced breast cancer.
9. Recite the screening for breast cancer.
10. Discuss the genetic predisposition to breast cancer and prophylactic mastectomy.

IV. Minimal Access Surgery

**Goal:** The resident will achieve a detailed knowledge and understanding of minimally access surgery.

**Objectives:**
1. Discuss the advantages and disadvantages of minimally invasive surgery.
2. Recite the physiologic effects of pneumoperitoneum, including:
   a. Acidosis
   b. Cardiovascular changes
   c. Urine output
   d. Pulmonary
   e. Air embolism
   f. Deep venous thrombosis
3. Discuss the basic equipment necessary for laparoscopic equipment.
4. Discuss the suitability of minimally invasive surgery for various disease processes.

IV. Endocrine Surgery

**Goal:** The resident will achieve a detailed knowledge of the evaluation and management of the endocrine surgery patient.

**Objectives:**
1. Discuss the evaluation, diagnosis, and management of surgical endocrine disease, including:
   a. Hot and cold thyroid nodules
   b. Adrenal masses and pheochromocytomas
   c. Primary, secondary, and tertiary hyperparathyroidism
   d. Pancreatic islet tumors
   e. Inherited endocrine tumor syndromes
   f. Thyroid malignancies
   g. Substernal goiters
2. Describe the care of patients with postoperative hypocalcemia.

B. Patient Care

**Goal:** The resident will provide patient care that is compassionate, appropriate, and effective for the treatment of surgical problems.

**Objectives:**
1. Preoperatively evaluate the fitness of a patient for surgery, including cardiac screening, nutritional status, etc.
2. Interprets laboratory and diagnostic tests.
3. Gradually acquire the basic operative skills, including:
   a. Incision of tissues
   b. Suturing techniques
   c. Knot tying
   d. Gentle handling of tissues
   e. Wound closure
   f. Dressings
4. Postoperatively manage and care for surgical patients.
5. Participate, with graduated independence, in basic general surgery procedures with, including:
   a. Placement of central venous catheters
   b. Proctoscopies
   c. Lymph node biopsies
   d. G and J-tube insertions
   e. Drainage of abscesses
   f. Fistulotomies and sphincterotomies
   g. Hernia repairs
   h. Tracheostomies
6. Participates, with graduated surgical independence, in general surgery procedures, including:
   a. Bowel resections
   b. Lysis of adhesions
   c. Formation of stomas
   d. Splenectomies
e. cholecystectomies
f. gastric resections
g. pancreatic resections
h. liver resections and biliary reconstructions

7. Participate in the diagnosis and care of patients with post-operative complications in general surgery.
8. Participate in preoperative preparation for surgery including bowel preps, antibiotic prophylaxis, DVT prophylaxis, fluid therapy, dietary management, etc.
9. Perform bedside procedures with graduated surgical independence, including:
   a. wound care
   b. drain care
   c. feeding tube placement and care
   d. placement and care of central lines
   e. pleural catheters
   f. nasogastric tubes
   g. foley catheters

11. Manage intraoperative and postoperative complications of minimally invasive surgery.
12. Participate in minimally invasive surgery, mastering techniques, including:
    a. maneuvering an angled laparoscope
    b. intracorporeal knot-tying
    c. closing port sites
    d. endoscopic stapling
    e. harmonic scalpel use
    f. placement of endoscopic loop
    g. bimanual dexterity

13. Participate with graduated surgical independence in endocrine surgery, including:
    a. thyroid lobectomies
    b. thyroidectomies
    c. parathyroid adenoma
    d. open and laparoscopic adrenalectomy

14. Participate with graduated surgical independence in breast cancer surgery, including:
    a. segmental mastectomy
    b. simple or modified radical mastectomy
    c. axillary dissection
    d. sentinel node mapping and sampling
    e. reconstruction after mastectomy

15. Participate with graduated surgical independence in the treatment of malignant melanoma, including:
    a. evaluation of suspicious skin lesions
    b. wide local excision
    c. sentinel node mapping
    d. regional lymph node dissections
    e. treatment of advanced melanoma

C. Practice Based Learning and Improvement

Goal: The resident will investigate and evaluate his or her own patient care practices, appraise and assimilate scientific evidence, and improve patient care practices.

Objectives:
1. Uses information technology to prepare for cases, using in the OR the knowledge of current modalities of care and the scientific evidence for that care.
2. Routinely analyzes the effectiveness of own practices in caring for surgery patients.
3. Improves own practices in the care of patients by integrating appropriately gathered data and feedback.
4. Educates medical students and other healthcare professionals in the practices of general surgery.
5. Functions independently with graduated advancement and appropriate faculty supervision.
6. Uses library sources to perform research and perform literature searches.
7. Understands the principles of clinical research and the application of biostatistics.

D. Interpersonal and Communication Skills

Goal: The resident will demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates.

Objectives:
1. Educates patients and families in follow-up strategies and rehabilitation for general surgery patients.
2. Demonstrates compassion for surgical oncology patients and families.
3. Provides adequate counseling and informed consent to patients.
4. Listens to patients and their families.
5. Assimilates data and information provided by other members of the general surgery health care team.
6. Charts and records accurate information.

E. System Based Practice

Goal: The resident will demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

Objectives:
1. Coordinates all aspects of the preoperative and postoperative care and rehabilitation surgical oncology patients.
2. Create a cost-effective, focused work-up of diagnostic testing.
3. Advocates for surgical patients within the health care system.
4. Refers surgical patients to the appropriate practitioners and agencies.
5. Facilitates the timely discharge and/or placement of surgery patients.
6. Learn to coordinate the admission of patients and communicate with primary care physicians, inpatient house staff, and consultants.
7. Discuss the scientific basis and regulations governing clinical trials and their importance in defining appropriate cancer therapy.
8. Coordinates the total care of the surgical oncology patient by partnering with other members of the oncology team, including:
   a. medical oncologists
   b. radiation oncologists
   c. social workers
   d. pastoral care
   e. hospice
   f. cancer researchers

F. Professionalism

Goal: The resident will demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

Objectives:
1. Develops a sensitivity of the unique stresses placed on families under care for general surgery.
2. Exhibits an unselfish regard for the welfare of general surgery patients.
3. Demonstrates firm adherence to a code of moral and ethical values.
4. Is respectful to patients and their families especially in times of stress to the family unit.
5. Respects and appropriately integrates other members of the general surgery health care team.
6. Provides appropriately prompt surgical consultations when requested.
7. Demonstrates sensitivity to the individual patient’s profession, life goals, and cultural background as they apply to surgery.
8. Is reliable, punctual, and accountable for own actions in the OR and clinic.
9. Understands the concepts of autonomy, beneficence, nonmaleficence, justice, and respect for life.
10. Maintains patient confidentiality.

References:
Farquharson's Textbook of Operative General Surgery (Hodder Arnold Publication) by Margaret Farquharson and Brendan Moran (2005)

III. Conference Schedule/Format:

1. Grand rounds: Every Tuesday
2. Core Course: Every Tuesday
3. Morbidity and Mortality Conference: Monday
4. Tumor Board: Wednesday
5. Preop conference

IV. Method of assessment of resident academic performance

1. Written evaluation of resident by faculty at end of rotation
2. Verbal feedback to resident by faculty
3. ABSITE yearly examination
4. Stanford GME House staff survey (annual)
5. Program Evaluation (annual)
6. 360 Evaluation
I. Rotation Format:

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<td>Responsible faculty member: (CV attached):</td>
<td>Dr. Lee/Girod/Kim/Aasi</td>
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II. Goals and Objectives:

Oral and Maxillofacial Surgery

A. Medical Knowledge

Goal: The resident will achieve a detailed knowledge of the techniques and practice of oral and maxillofacial surgery.

Objectives:

1. Discuss the embryology of the head and neck.
2. Recite the tenets of growth of the craniofacial skeleton.
3. Draw the anatomy of the head and neck with particular concern to the jaws and craniofacial skeleton.
4. Discuss the principles of odontogenesis.
5. Recite the principles of and infiltration techniques of local anesthesia used in the head and neck.
6. List the principles of bone fixation and bony healing.
7. Discuss the general evaluation of the facial trauma patient.
8. Recite the techniques of the treatment of facial fractures, including:
   a. frontal sinus fractures
   b. orbital fractures
   c. nasal fractures
   d. NOE fractures
   e. midface and maxillary fractures
   f. mandibular fractures
   g. management of teeth in fractures
9. Discuss the unique treatment of pediatric facial fractures.
10. Describe the cephalometric analysis of maxillofacial surgery patients.
11. Discuss the common diagnoses in maxillofacial surgery and their management, including:
   a. retrogenia
   b. mandibular excess and deficiency
   c. vertical maxillary excess
   d. maxillary deficiency
12. Discuss the different kinds of occlusion, including:
   a. overjet
   b. overbite
   c. Angle classification
   d. crossbites
13. Discuss the use of distraction osteogenesis in maxillofacial surgery.
14. Discuss maxillofacial surgery in the cleft patient.
15. Describe the acquired diseases of the TMJ and their management.
16. Describe the use of dento-facial prosthetics.

B. Patient Care

Goal: The resident will provide patient care that is compassionate, appropriate, and effective for the treatment of surgical problems.

Objectives:

1. Perform the various local anesthetic facial blocks for procedures done in oral and maxillofacial surgery.
2. Perform with graduated surgical independence bony fixation of the craniofacial skeleton.
3. Perform the head and neck exam in the facial trauma patient.
4. Perform the facial evaluation for orthognathic surgery patients.
5. Participate in the cephalometric analysis, prediction tracing, and preoperative surgical planning of maxillofacial surgery patients.
6. Perform a face-bow transfer.
7. Participate in preoperative model surgery.
8. Participate in common maxillofacial surgical procedures, including:
   a. facial fractures
   b. genioplasties
c. sagittal split mandibular osteotomies

d. maxillary LeFort I osteotomies

e. bimaxillary osteotomies


C. Practice Based Learning and Improvement

**Goal:** The resident will investigate and evaluate his or her own patient care practices, appraise and assimilate scientific evidence, and improve patient care practices.

**Objectives:**

1. Uses information technology to prepare for cases, bringing to the OR the knowledge of current modalities of care and the scientific evidence for that care.
2. Routinely analyzes the effectiveness of own practices in caring for surgery patients.
3. Improves own practices in the care of patients by integrating appropriately gathered data and feedback.
4. Educates medical students and other healthcare professionals in the practices of oral and maxillofacial surgery.
5. Functions independently with graduated advancement and appropriate faculty supervision.
6. Uses library sources to perform research and perform literature searches.
7. Understands the principles of clinical research and the application of biostatistics.

D. Interpersonal and Communication Skills

**Goal:** The resident will demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates.

**Objectives:**

1. Educates patients and families in post oral and maxillofacial surgery care.
2. Demonstrates compassion for patients and families.
3. Provides adequate counseling and informed consent to patients.
4. Listens to patients and their families.
5. Assimilates data and information provided by other members of the health care team.
6. Charts and records accurate information.

E. System Based Practice

**Goal:** The resident will demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

**Objectives:**

1. Coordinates all aspects of the oral and maxillofacial surgery care for patients.
2. Demonstrates knowledge of cost-effective oral and maxillofacial surgery care.
3. Advocates for patients within the health care system.
4. Refers patients to the appropriate practitioners and agencies.
5. Facilitates the timely discharge of same day surgery patients
6. Works with primary care physicians, and other consultants such as cardiologists, toward the safe administration of anesthesia.

F. Professionalism

**Goal:** The resident will demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

**Objectives:**

1. Develops a sensitivity of the unique stresses placed on families under care for surgical diagnoses.
2. Exhibits an unselfish regard for the welfare of surgical patients.
3. Demonstrates firm adherence to a code of moral and ethical values.
4. Is respectful to patients and their families especially in times of stress to the family unit.
5. Respects and appropriately integrates other members of the health care team.
6. Provides appropriately prompt consultations when requested.
7. Demonstrates sensitivity to the individual patient's profession, life goals, and cultural background as they apply to health care.
8. Is reliable, punctual, and accountable for own actions in the OR and clinic.
9. Understands the concepts of autonomy, beneficence, nonmaleficence, justice, and respect for life.
10. Maintains patient confidentiality.

References:

- **Maxillofacial Surgery: 2-Volume Set** by Peter Ward Booth BDS MBChB FDS FRCS, Stephen Schendel MD DDS FACS, and Jarg-Erich Hausamen MD DDS PhD (2006)
- **Contemporary Oral and Maxillofacial Surgery** by James R. Hupp DMD MD JD MBA FACS FACD FICD, Edward Ellis III DDS MS, and Myron R. Tucker DDS (2008)

**Ophthalmology/Oculoplastics**

The PGY 2 and 3 will spend at least one-half day per week on the Oculoplastics Service under the direct supervision of Jonathan Kim, MD. Generally, this is on Wednesdays. Residents should communicate with the Adult Chief Resident about changes in the schedule as needed. The PGY 2 is expected to obtain the basic knowledge and skills associated with Oculoplastic Surgery; whereas, the PGY 3 is expected to develop advanced skills and knowledge.

**A. Medical Knowledge**

I: Anatomy/Physiology/Embryology

**Goal:** The resident will achieve detailed knowledge of the anatomy, physiology, embryology of the eye and periocular structures, and will apply this knowledge to the medical management of disorders and processes in this anatomic area.
Objectives:
1. Describe the anatomy of the orbit including bony anatomy, foramina, cranial nerves, soft tissue anatomy (canthus, tarsus, septum, lamellae, fat compartments), lacrimal gland, lacrimal duct nerves, and blood supply.
2. Identify and draw the anatomy of the orbital bones.
3. Identify the anatomy of the eye including normal dimensions, bony structures, eyelids, extraocular muscles, innervation, vascular supply, and lacrimal apparatus. Be able to draw this diagrammatically.
4. Explain the physiology and function of the cornea, lens, vitreous humor, aqueous humor, retina, fovea centralis.
5. Explain the general principles of embryology of the eye and congenital anomalies.

II: Congenital Disorders
Goal: The resident will achieve familiarity with the anatomy, embryology and principles of treatment of congenital disorders of the eye.
Objectives:
1. Demonstrate intimate knowledge of the common congenital disorders of the eye (e.g., blepharoptosis, blepharochalasis, dermatochalasis)
2. Discuss the etiology, genetics, embryology and anatomy of congenital disorders of the eye.
3. Be familiar with growth and development of the eye and orbit, and its affect on anomalies and their treatment

III: Benign and Malignant Tumors
Goal: The resident will obtain knowledge of benign and malignant tumors of the eye and periorbita, understand the biologic basis of treatment options for these lesions, and perform complete management of such lesions including diagnosis, surgery and nonsurgical therapy.
Objectives:
1. Recognize the clinical presentation of squamous and basal cell carcinoma of the eyelids/peri-orbita.
2. Recite the lymphatic drainage pattern of the periorbital structures and the relationship to the management of malignant tumors.
3. Recite the methods for diagnosis and the options for treatment of squamous and basal cell carcinomas of the periorbita.
4. Recite the TNM staging system for tumors of the head and neck; know the features and biologic behavior of these lesions.
5. Describe the general principles and techniques of adjuvant therapy such as radiation therapy and chemotherapy for ocular malignancies.
6. Discuss the indications for and the role of neck dissection in the treatment of head and neck malignancies.
7. Recite the process of long-term follow-up for patients with ocular malignancies.
8. Recite the diagnosis of and principles of care for:
   a. eyelid and lacrimal neoplasms
   b. infections of the eye/eyelid
   c. disease of eye/eyelid

IV: Trauma
Goal: The resident will be familiar with the mechanisms of traumatic ocular injuries, understand the diagnostic techniques and therapeutic options for such problems, and perform complete management of traumatic injuries of the eyes/peri-orbita.
Objectives:
1. Describe the priorities involved in treating patients with ocular injuries.
2. Describe the mechanical and structural properties of the orbital skeleton as they relate to fracture patterns in facial trauma.
3. Describe the concepts of primary bone healing, malunion, nonunion and osteomyelitis.
4. Discuss the advantages and disadvantages of various techniques of treatment of orbital fractures including:
   a. nonoperative treatment
   b. open reduction with and without fixations
   c. bone grafting.
5. Describe the treatment of orbital fractures complications including:
   a. secondary deformities
   b. infections and osteomyelitis
   c. enophthalmos
   d. diplopia
6. Describe the neuroanatomy, cranial nerve anatomy and soft tissue anatomy pertinent to orbital fractures.
7. Recite the treatment of soft tissue injuries of the eye/eyelid including:
   a. lacrimal apparatus.
8. Describe the evaluation and treatment of secondary deformities of orbital fracture including:
   a. enophthalmos
   b. soft tissue contractures, ectropion, entropion.
10. Discuss the principles of care and the surgical steps in the treatment of the following:
    b. Blepharoptosis
    c. Enophthalmos
    d. Ectropion
    e. Entropion
    f. Lower lid laxity/ scleral show
    g. Paralysis of eyelid
    h. Eyelid reconstruction from trauma, or tumor resection
    i. Local flap reconstructions of the lower eyelid
    j. Grafts (cartilage, mucosa, skin) of the lower eyelid

B. Patient Care
Goal: The resident will provide patient care that is compassionate, appropriate, and effective for the treatment of oculoplastic problems.
Objectives:
Objectives:

1. Perform a basic eye exam and appropriate analysis of any abnormalities.
2. Utilize radiographic and special diagnostic studies to evaluate ocular anomalies.
3. Formulate a definitive short- and long-term treatment plan for common ocular disorders, choosing the most appropriate surgical or nonsurgical modality.
4. Draw the reconstruction of lower and upper eyelids.
5. Diagnose and develop a treatment plan for eyelid deformities.
6. Coordinate nonsurgical treatment of ocular disorders.
7. Provide perioperative care and participate in surgical treatment of patients with ocular anomalies.
8. Utilize diagnostic techniques for ocular tumors including radiographic methods (e.g., CT Scan, MRI scan, etc) and biopsies.
9. Perform basic biopsies.
10. Recite the steps in the surgical treatment of:
   a. Ocular and periorbital tumors
11. Participate in the extirpative surgery for ocular tumors, including performing orbital extenereations and resection of eyelid tumors.
12. Perform an orderly and systematic physical examination of the patient with ocular/periorbital trauma.
13. Interpret radiographic diagnostic studies including CT/3D CT scans, MR imaging, and angiography with respect to the ocular trauma patient.
14. Perform the staged management of devastating open ocular injuries including wound care, debridement and reconstruction.
15. Perform the acute repair of ocular/periorbital trauma.
16. Perform secondary scar revision from periorbital trauma.
17. Perform cosmetic periorbital procedures (e.g., upper and lower lid blepharoplasties, botox injections, canthopexy, canthoplasty, tarsorraphy)

C. Practice Based Learning and Improvement

Goal: The resident will investigate and evaluate his or her own patient care practices, appraise and assimilate scientific evidence, and improved patient care practices.

Objectives:

1. Use information technology to prepare for surgical cases, bringing to the OR the knowledge of current modalities of care for patients with ocular/periorbital diagnoses and the scientific evidence for that care.
2. Routinely analyzes the effectiveness of own practices in caring for oculoplastic patients.
3. Improve own practices in the care of oculoplastic patients by integrating appropriately gathered data and feedback.
4. Educate medical students and other healthcare professional in the practices of oculoplastic surgery.
5. Function independently with graduated advancement and appropriate faculty supervision in the evaluation and treatment of patients with oculoplastic diagnoses.
6. Participate in, and appreciate the value of outcome studies as they apply to diagnoses of the eye/periorbita.

D. Interpersonal and Communication Skills

Goal: The resident will demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates.

Objectives:

1. Educate patients and families in pre- and post-operative care of oculoplastic patients.
2. Demonstrate compassion for patients and families with congenital and acquired anomalies of the eye/periorbita.
3. Provide adequate counseling and informed consent to patients.
4. Listen to patients and their families.
5. Assimilate data and information provided by members of the health care team, in the care of patients with oculoplastic anomalies.
6. Assimilate data and information provided by the head and neck team and tumor board in the care of patients with ocular/periorbital cancer.

E. System Based Practice

Goal: The resident will demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

Objectives:

1. Function within the organization of specialty clinics (Head and Neck Tumor Board) including the coordination of all special services in the evaluation of patients with these anomalies.
2. Be able to coordinate the nonsurgical treatment of patients with ocular anomalies among contributing specialties (prosthetics)
3. Understand the value of and function within a team approach to treat patients with ocular/periorbital malignancies
4. Participate in tumor-board conference (if applicable).
5. Participates in multidisciplinary planning and treatment for patients with ocular malignancies.
6. Coordinate all aspects of ocular rehabilitation, including reeducation, and prosthetics.
7. Demonstrate knowledge of cost-effective oculoplastic reconstruction.
8. Advocate for oculoplastic patients within the health care and insurance system.
9. Refer oculoplastic patients to the appropriate practitioners and agencies.
10. Facilitate the timely discharge of oculoplastic patients.

F. Professionalism

Goal: The resident will demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

Objectives:

1. Develop a sensitivity of the unique stress placed on families under care for oculoplastic anomalies.
2. Exhibit an unselfish regard for the welfare of oculoplastic patients.
3. Demonstrate firm adherence to a code of moral and ethical values.
4. Be respectful to oculoplastic patients and their families especially in times of trauma and stress to the family unit.
5. Respect and appropriately integrate other members of the oculoplastic team.
6. Provide appropriately prompt consultations when requested.
7. Demonstrate sensitivity to the individual patient’s profession, life goals, and cultural background as they apply to oculoplastic diagnoses of trauma, malignancy, and congenital anomalies.
8. Be reliable, punctual, and accountable for own actions in the OR and clinic.

References:
Techniques in Ophthalmic Plastic Surgery with DVD: A Personal Tutorial, 1e (Book & DVD) [Hardcover]
by Jeffrey A. Nerad MD
Color Atlas of Oculoplastic Surgery by David T, MD Tse

Dermatology
A. Medical Knowledge
I: Anatomy/Physiology/ Embryology
Goal: The resident will demonstrate knowledge of the histology, function, and development of the skin.
Objectives:
1. Discuss the structure and functions of the epidermis.
2. Discuss the structure and functions of the dermis.
3. Discuss the structure and functions of the skin appendages.
4. Discuss the structure and function of subcutaneous tissue and fascial layers.
5. Recite the embryologic origin of the skin and at which gestational age components of the skin appear.
6. Describe the differentiation of the stratum germinativum into surface appendages, and the differentiation of the dermis.
7. Describe the structure and function of the nails.
8. Discuss the components of dermis including: fibroblasts, collagens, elastin, ground substance.
9. Discuss the structure and function of the skin appendages including:
   a. hairs
   b. eccrine glands (sweat glands)
   c. apocrine glands (axilla, anal-genital region, external ear, eyelid, breast)
   d. sebaceous glands
   e. neural end organs.
10. Discuss the reaction of skin to the following:
    a. heat
    b. cold
    c. mechanical trauma
    d. microbial trauma
    e. UV light trauma
    f. pharmacologic agents.

II: Benign and Malignant Skin Lesions
Goal: The resident will demonstrate knowledge of benign and malignant lesions, recognize the morphologic and histologic features of the more common lesions, and effectively manage small and large skin tumors using a variety of treatment methods.
Objectives:
1. List the clinical presentation of benign and malignant skin lesions and generalized skin disorders.
2. Discuss the natural history of both treated and untreated benign and malignant cutaneous lesions and generalized skin disorders.
3. Recite the histologic grading and clinical staging systems used for malignant and premalignant skin tumors.
4. Discuss other treatment modalities including, but not limited to: excisional therapy, Moh’s micrographic surgery, cryotherapy, laser therapy, and chemotherapy.
5. Discuss the histologic characteristics of benign and malignant cutaneous lesions.
6. Discuss the pathology, biologic behavior, and treatment of the following:
   a. benign epithelial and adnexal tumors (nevi, papillomas, keratinous cysts)
   b. benign mesodermal tumors (hemangioma, vascular malformations)
   c. malignant cutaneous tumors, epithelial and mesodermal (basal cell carcinomas, squamous cell carcinoma, malignant melanoma, sarcomas)
   d. premalignant skin tumors

III: Congenital, Aesthetic and Functional Problems
Goal: The resident will demonstrate knowledge of the common congenital disorders and disease processes of the skin, as well as the pathophysiology of aging.
Objectives:
1. Explain the basic physiology of the aging process of the skin.
2. Describe the basic physiologic processes of sun exposure and its effect on the skin.
3. Discern the role of lasers in the management of various skin conditions.
4. Describe common inflammatory disorders of the skin such as cellulitis, lymphangitis, hidradenitis suppurativa, necrotizing fasciitis, and its medical and surgical treatment.
5. Discuss common generalized dermatologic diseases such as: scleroderma, dermatomyositis, lupus erythematosus.
6. Discuss the common congenital disorders of the skin, such as: xeroderma pigmentosa, Ehlers Danlos syndrome, basal cell nevus syndrome, etc.
7. Recite the basic principles of medical management and surgical treatment of common congenital disorders of the skin.
8. **B. Patient Care**

**Goal:** The resident will provide patient care that is compassionate, appropriate, and effective for the treatment of disorders of the integument.

**Objectives:**
1. Evaluate both simple and complex cutaneous lesions, and proceed with diagnostic steps necessary to secure a definitive diagnosis.
2. Formulate definitive treatment plan for particular skin lesions by choosing a surgical or nonsurgical treatment modality (based on size, anatomical location, and physical condition of the patient).
3. Participate in diagnostic studies of the skin, including incisional and excisional biopsy, needle biopsy, and punch biopsy.
4. Participate in extirpative surgery for a variety of benign and malignant skin lesions and associated locoregional disease, choosing the optimal treatment for the particular region to be treated.
5. Participate in complex procedures (including skin grafts, local or distant flaps, or free tissue transfer).
6. Perform reconstructive surgery on patients including functional and aesthetic procedures.
7. Perform, with graduated surgical experience, laser treatments for conditions of the skin including:
   a. vascular lesions
   b. pigmented lesions
   c. unwanted hair
   d. skin resurfacing
   e. tattoo
8. Participate in surgery on patients with congenital skin disorders.
10. Recommend pharmacologic agents for prevention of sun exposure, instruct patients in their use and in general principles of skin protection from the sun.
11. Evaluate and treat patients with bacterial, viral and fungal infections such as cellulitis, lymphangitis, necrotizing fasciitis, and gas gangrene.
12. Perform surgical extirpation and reconstruction for hidradenitis suppurativa.
13. Participate in the surgical care of patients with generalized dermatological conditions such as scleroderma and lupus erythematosus.
14. Formulate a definitive treatment plan for regional or distant sites of malignant cutaneous metastasis.

**C. Practice Based Learning and Improvement**

**Goal:** The resident will investigate and evaluate his or her own patient care practices, appraise and assimilate scientific evidence, and improve patient care practices.

**Objectives:**
1. Use information technology to prepare for surgical cases, bringing to the OR the knowledge of current modalities of care and the scientific evidence for that care.
2. Routinely analyze the effectiveness of own practices in caring for patients with diagnoses involving the skin.
3. Improve own practices in the care of patients by integrating appropriately gathered data and feedback.
4. Educate medical students and other healthcare professionals in the practice of skin care and prevention of skin cancer.
5. Function independently with graduated advancement and appropriate faculty supervision.

**D. Interpersonal and Communication Skills**

**Goal:** The resident will demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates.

**Objectives:**
1. Educate patients and families in the strategies to prevent skin cancer.
2. Demonstrate compassion for patients and families with skin disease.
3. Provide adequate counseling and informed consent to patients.
4. Listen to patients and their families.
5. Assimilate data and information provided by all members of the plastic surgery team.
6. Chart and record accurate information.
7. Be able to explain in a comprehensible but simplified manner to patients the nature of skin cancer, its extent, treatment options and long term results.

**E. System Based Practice**

**Goal:** The resident will demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

**Objectives:**
1. Coordinate all aspects of plastic surgery rehabilitation, including splinting, pressure garment use, physical therapy, occupational therapy, and social work.
2. Direct the rehabilitation of the burn patient by partnering with the following:
   a. Physical Therapy
   b. Occupational Therapy
   c. prosthetic and orthotics specialists.
3. Demonstrate knowledge of cost-effective plastic surgery care.
4. Advocate for patients within the health care system.
5. Understand the Healthcare system.
6. Refer patients to the appropriate practitioners and agencies.
7. Facilitate the timely discharge of skin cancer patients.
8. Coordinate care of skin cancer patients with primary care providers, general dermatologists, and Moh’s surgeons.

**F. Professionalism**

**Goal:** The resident will demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and
sensitivity to a diverse patient population.

Objectives:

1. Develop a sensitivity of the unique stress placed on families under care for plastic surgery diseases.
2. Exhibit and unselfish regard for the welfare of patients.
3. Demonstrate firm adherence to a code of moral and ethical values.
4. Be respectful to burn patients and their families, especially in times of trauma and stress to the family unit.
5. Respect and appropriately integrate other members of the healthcare team.
6. Provide appropriately prompt skin care consultations when requested.
7. Demonstrate sensitivity to the individual patient’s profession, life goals, and cultural background as they apply to plastic surgery reconstruction.
8. Be reliable, punctual, and accountable for own actions in the OR and clinic.

References:
Andrews' Diseases of the Skin: Clinical Dermatology - Expert Consult - Online and Print, 11e (James, Andrew's Disease of the Skin) [Hardcover] William D. James MD (Author), Timothy Berger MD (Author), Dirk Elston MD (Author)
Clinical Dermatology 2012 by M.D., C. G. Weber

III. Conference Schedule/Format:

1. Stanford Plastic Surgery Lecture Series: Tuesday – 4:30-6:45pm
2. Quality Assurance Meeting
3. Journal Club

IV. Method of assessment of resident academic performance

1. Monthly written evaluation of resident by faculty
2. Verbal feedback to resident by faculty
3. Stanford GME House staff survey (annual)
4. Program Evaluation (annual)
5. In-service Examination
6. 360 Evaluation