

UNIVERSITY OF TEXAS MEDICAL SCHOOL AT HOUSTON  
DIVISION OF CARDIOLOGY

CLINICAL CARDIAC ELECTROPHYSIOLOGY FELLOWSHIP

OUTLINE OF CURRICULUM

2002

## TABLE OF CONTENTS

OBJECTIVES	4
ROTATIONS	6
EP Inpatient Service	
EP Consult Service	
Invasive EP	
Electives	
DIDACTIC SCHEDULE	10
ANCILLARY COURSES	14
Advanced Cardiac Life Support (ACLS)	
Radiation Safety Course	
CARDIOLOGY DIDACTIC SCHEDULE	17

The purpose of this Manual is to describe the core curriculum of the Fellowship Program in Clinical Cardiac Electrophysiology at the University of Texas - Houston. The Manual supplements the Manual for Fellows in Clinical Cardiac and is updated annually at the beginning of the academic year.

## GOALS AND OBJECTIVES

The first goal of the CCEP fellowship is to provide qualified cardiologists with a balanced, structured and scholarly experience in clinical electrophysiology. Diagnosis and management of clinical arrhythmias is emphasized using both invasive and noninvasive techniques. The second goal is to encourage scholarly productivity by providing opportunities for both basic and clinical research. Toward these ends, specific educational objectives include:

- 1) *Providing clinical experience* in diagnosis and management of patients with
  - a) a variety of rhythm disorders, including, but not limited to:
    - (1) sinus node dysfunction,
    - (2) atrioventricular and intraventricular conduction delay and block, and
    - (3) supraventricular and ventricular tachyarrhythmias; and
  - b) clinical conditions such as:
    - (1) unexplained syncope,
    - (2) aborted sudden cardiac death,
    - (3) palpitations,
    - (4) Wolff-Parkinson-White syndrome,
    - (5) prolonged QT syndromes, and
    - (6) other inherited and acquired arrhythmia syndromes;
  - c) conditions that constitute indications for nonpharmacologic therapy, such as ablation, surgery, and ICD implantation.

The experience shall include specific instruction in:

- a) the sensitivity, specificity and positive and negative accuracy of diagnostic tests used, and
- b) indications, contraindications, risks and limitations of CCEP procedures and skills.

Clinical experience shall involve:

- a) consultation to physicians in other disciplines,
- b) care of patients in the cardiac care unit, emergency room, or other intensive care settings,
- c) care of the patient before and after an electrophysiologic procedure,
- d) care of patients with postoperative arrhythmias,
- e) outpatient follow-up of patients treated with drugs, devices, and/or surgery,
- f) electrocardiography - proficiency in the interpretation of the standard 12-lead ECG, stress testing, ambulatory ECG recording, signal-averaged ECG, T wave alternans testing and telephone-transmitted ECG's,
- g) care of patients with temporary and permanent pacemakers,
  - h) care of patients with ICD's.

- 2) *Development of technical proficiency* in CCEP through:

a) interpretation of noninvasive testing relevant to arrhythmia diagnosis and treatment, such as:

- (1) relevant imaging studies, including chest radiography,
- (2) electrocardiograms and ambulatory ECG recordings,
- (3) tilt testing,
- (4) continuous in-hospital ECG recordings,
- (5) signal-averaged ECG recordings,
- (6) T wave alternans analysis,
- (7) exercise and pharmacologic stress test ECG recordings,
- (8) transtelephonic ECG recordings.

b) performance and interpretation of invasive electrophysiologic testing, including:

- (1) electrode catheter introduction and positioning in atria, ventricles, coronary sinus, His bundle area and pulmonary artery,
- (2) endocardial electrogram recording, including an understanding of amplifiers, filters and signal processors, and measurement of intervals
- (3) programmed stimulation to obtain conduction times and refractory periods, and to initiate, terminate and entrain tachycardias,
- (4) pharmacologic stimulation, and
- (5) activation sequence mapping recording, including electroanatomic mapping,

c) performance of therapeutic catheter ablation for a variety of arrhythmias, including:

- (1) AV nodal reentry tachycardia,
- (2) AV reentry associated with accessory pathways,
- (3) atrial tachycardia,
- (4) atrial flutter,
- (5) AV junction ablation and modification, and
- (6) ventricular tachycardia, and

d) implantation of pacemakers and defibrillators (ICD's), including:

- (1) device programming,
- (2) noninvasive programmed stimulation for arrhythmia induction through the device,
- (3) defibrillation threshold testing,
- (4) cardiac resynchronization therapy, and
- (5) final prescription of antitachycardia pacing and defibrillation therapies.

3) *Formal instruction* in:

a) basic cardiac electrophysiology, including, but not limited to:

- (1) the role of ion channels and currents and gap junctions in the genesis of normal cardiac rhythm,
- (2) genesis of arrhythmias,
- (3) normal and abnormal electrophysiologic responses,
- (4) autonomic influences,
- (5) effects of ischemia, drugs, and other interventions.

b) clinical cardiac electrophysiology,

c) pharmacology of antiarrhythmic drugs,

d) arrhythmia control device prescription and management,

e) genetic basis of pathologic arrhythmias,

- f) epidemiology of arrhythmias and
- g) clinical trials of arrhythmia management and their impact on clinical practice.

## ROTATIONS

Hermann Hospital serves as the primary site of clinical training. Consultative services are also rarely performed at the Lyndon B. Johnson General Hospital and the University of Texas M. D. Anderson Cancer Center. While primary responsibilities vary with each rotation, fellows are always expected to assume an active role in patient care and in the teaching of nurses, medical students, house staff and general cardiology fellows. Participation in clinical research activities is expected and integrated throughout all clinical rotations. In addition, dedicated research electives are available.

HERMANN HOSPITAL  
6411 Fannin  
Houston, Tx 77030

Chief of Medicine:  
Frank Arnett, MD  
Chairman, Department of Internal Medicine  
Phone: (713) 500-6500

Chief of Cardiology:  
Richard W. Smalling, MD  
(713) 500-6559

Principal Teaching Method: On clinical rotations, trainees will be principally taught by their supervising CCEP attending physician. Instruction and experience will be provided at the bedside and during teaching rounds using interactive discussion. Additional teaching will occur through scheduled didactic lectures and conferences. The importance of continuous self-study during training is emphasized with the realization that this should be a lifelong commitment.

Fellow Evaluation: Fellows are evaluated at the end of each rotation by the responsible attending CCEP physician. The evaluation surveys knowledge, skills, satisfactory progressive scholarship and professional growth. Each fellow is responsible for reviewing the completed form with the attending physician and delivering the completed form to the fellowship office. The fellow may respond in writing to evaluations. Fellows keep a running log of procedures and copies will be submitted after each rotation to the fellowship office.

Faculty Evaluation: Faculty are evaluated in writing by both CCEP and general cardiology fellows rotating on the EP service at the end of each rotation. Fellows are also invited to comment on the educational content and value of the rotation in writing.

### EP Inpatient Service

Objective: The objectives of the EP Inpatient rotation is to provide direct experience for CCEP

fellows in:

- inpatient management of clinical bradyarrhythmias and tachyarrhythmias,
- clinical arrhythmia syndromes,
- arrhythmia diagnosis,
- interpretation of ECG telemetry recordings,
- usefulness and limitations of noninvasive and invasive testing,
- bedside procedures,
- use and monitoring of antiarrhythmic drugs and devices,
- performance and interpretation of invasive CCEP procedures, and
- clinical decision making about invasive EP procedures and patient management.

The cardiology inpatient service at Hermann Hospital is oriented toward management of acute ischemic syndromes, arrhythmias, congestive heart failure, and chronic ischemic heart disease. Private cardiologists and UT faculty cardiologists admit patients to these teams for purposes of patient care. The team consists of one attending cardiologist, one general cardiology fellow, four Internal Medicine residents and four interns, and 3 - 4 medical students. Cardiac Electrophysiology Staff serve as rotating attending physicians on the Consult Team, along with other Cardiology faculty. CCEP Staff also serves as consultants to the team. One CCEP fellow will serve as an arrhythmia consultant to the team, coordinating invasive and non-invasive electrophysiologic services. The CCEP Fellow will round with the team and may write progress notes to supplement the comments of others. Patients who undergo surgery will still be followed by the team, although direct involvement in patient care will be consultative until the patient transfers out of the CVICU and back to the cardiology units.

All Swan-Ganz catheter insertions, transvenous pacing catheter insertions and other invasive bedside procedures must be done by or under the direct supervision of the Cardiology or CCEP fellow, according to the level of skill and expertise of each resident and fellow. Attending Staff and senior Fellows are available to assist and supervise Fellows not yet skilled in a particular procedure. Attending Rounds with the UT Staff Attending assigned to the team for the month generally are held from 10:00 AM to 12:00 noon every day. The schedule may be modified on an individual basis depending upon work activities, etc. The level of supervision provided by the attending will depend upon the complexity of the case and the ability and experience of the particular residents and fellows involved. The housestaff should be the primary caretakers, working under the direction of the Fellows and the Attending Physician. In general, physician orders should be written by the Resident or Intern, except in emergency situations or when patient care can be expedited, in which case the Attending Staff and Fellows may do so.

While serving on the EP Inpatient service, the CCEP Fellow serves as the primary fellow on invasive EP procedures involving patients on that service, following the procedures described under "Invasive EP" below. The CCEP Inpatient fellow is typically involved in the care of 5 – 15 patients with a maximum of 20 patients. If this maximum number is reached, the fellow should inform the program director who will assign one of the other CCEP or general Cardiology fellows to assist with this service. The CCEP inpatient fellow will also serve as second backup to the Invasive CCEP and EP Consult Fellows for performing procedures in the EP labs.

Occasional patients may be designated as "Non-teaching patients". In those instances, the attending staff physician is directly responsible for all aspects of the individual's care. Cardiology and CCEP Fellows,

housestaff and students will not routinely participate in the care of these individuals, however may perform specific tasks at the discretion of the attending staff. As with all inpatients, emergency medical services will be administered to non-teaching patients by CCEP Fellows in the course of their duties on the Code Team or as a bystander until the attending staff physician is directly available to assume those responsibilities.

### EP Consult Service

Objective: The objective of the EP consult service is to provide direct experience for CCEP fellows from the perspective of a consultant in arrhythmia management in patients admitted to both cardiology and non-cardiology units. Experience will be provided in:

- inpatient management of bradyarrhythmias and tachyarrhythmias,
- clinical arrhythmia syndromes,
- arrhythmia diagnosis,
- usefulness and limitations of noninvasive and invasive diagnostic testing,
- bedside procedures and tilt table testing,
- interrogation and programming of pacemakers and ICDs,
- interpretation of ambulatory ECG monitors and transtelephonic monitoring,
- use and monitoring of antiarrhythmic drugs, and
- clinical decision making in invasive EP procedures and patient management.

The EP Consult service provides consultation on cardiac arrhythmias for all other services and requesting physicians at Hermann Hospital and rarely at MD Anderson Cancer Center. It consists of an attending physician, a general Cardiology Fellow on EP elective and a CCEP Fellow. The Fellows are expected to evaluate all consult patients on the day the consult is requested and to promptly discuss the case with the CCEP faculty. Written consultation notes will be left in the medical record in a timely fashion and direct communication with the primary service is expected. The fellows should make daily rounds on all patients on the team and are expected to write daily progress notes on all patients. Attending rounds are conducted daily and the time will vary according to the daily schedule. The CCEP and rotating fellow are typically responsible for 5 – 10 patients each with a maximum of 20. If this maximum number is reached, the fellow should inform the program director who will assign one of the other clinical fellows to assist with this service. Invasive bedside procedures on consult service patients are to be done by the Fellows under the supervision of the attending staff. The CCEP consult fellow will supervise tilt table testing performed by nursing staff in the President Bush Center. CCEP consult fellows will attend Pacemaker/ Device Clinic for two half-days weekly, at the least. The CCEP Fellow will serve as the primary fellow on invasive EP procedures involving patients on the consult service, following the procedures listed under “Invasive EP”. The CCEP consult fellow and rotating cardiology fellow are responsible for reading 12 lead ECG’s, Holter monitors and transtelephonic monitoring results on a daily basis under the supervision of the CCEP consult attending staff. He or she will also serve as first backup to the Invasive CCEP Fellow for performing other procedures in the EP lab. Emergency consults (5:00 pm to 8:00 am and weekends) are first seen by the in-house cardiology resident. The resident must then discuss the case with the in-house cardiology fellow, who will also see the patient also, if necessary. During these hours, the on-call CCEP fellow and attending physician should be notified of the consult and the fellow’s assessment; they will be available to return to the hospital to assist directly in the care of the patient as needed.

### Invasive EP

Objective: To provide direct experience in:  
performance and interpretation of invasive electrophysiologic testing,  
catheter placement and manipulation,  
programmed stimulation,  
pharmacologic manipulation of arrhythmias,  
arrhythmia mapping using activation sequence and electroanatomic methods,  
radiofrequency catheter ablation,  
implantation of permanent pacemakers and defibrillators, and  
lead extraction.

The CCEP Fellow will participate in the initial evaluation of all patients scheduled for invasive EP studies not on the Inpatient EP or EP Consult services, and develop skills in invasive techniques under the direction of the Attending Staff. This Fellow will be primarily responsible for outpatients undergoing invasive procedures. He or she will see patients prior to the procedure, taking a complete history and physical, reviewing the chest X-ray, ECG and laboratory data. The patient will then be instructed on the procedure, and informed consent will be obtained. The day of the procedure, the Fellow will perform the procedure, under the direct supervision of the Attending Staff, to the level of his/her experience and skill. The fellow will discontinue sheaths as appropriate and ensure adequate hemostasis. After the procedure, the Fellow will notify the accepting house staff and write post-procedure orders, as appropriate, and will complete the physicians' procedure report. The Fellow will review the results of the procedure with the Attending staff prior to completion of the final report.

The invasive CCEP Fellow will write a note on the chart the evening of the procedure, noting adequacy of hemostasis, status of wounds and distal pulses and commenting on any other consequences or potential complications that may have occurred. This fellow will check postoperative chest films on any patient who has undergone subclavian or jugular venous catheterization and/or device implantation and note the results in the evening note. Resumption of anticoagulant and other necessary medication will be ensured in a timely fashion and with appropriate monitoring. The Attending will be notified of any significant complications immediately and such will be documented in the chart. For patients still hospitalized or under observation on the day following the procedure, wound checks will be performed by the CCEP invasive fellow and examination results noted in the medical record. Discharge orders and followup instructions will be written and communicated to the patient by the fellow when the patient is stable for discharge. To provide for continuity of care, patients who subsequently undergo other procedures or surgery will be followed by the CCEP Fellow who was involved in the initial procedure.

### Electives

Objective: To enrich the training experience in cardiac electrophysiology and to supplement experience in areas of special interest or deficiency to suit the needs of the individual fellow.

Elective months are available in the Pacemaker/ Device Clinic and in basic electrophysiologic research. Extramural electives in pediatric CCEP or special research facilities may be arranged on a case-by-case basis.

## DIDACTIC SCHEDULE

In didactic CCEP conferences, the following curriculum will be emphasized:

- Basic electrophysiology, including formation and propagation of normal and abnormal impulses, autonomic nervous control of cardiac electrical activity, and mechanisms of clinically significant arrhythmias and conduction disturbances,
- Evaluation and management of patients- both ambulatory and hospitalized- who have clinical syndromes resulting from bradyarrhythmias or tachyarrhythmias,
- Indications for and interpretation of noninvasive diagnostic studies, including esophageal, scalar and signal-averaged ECG, ambulatory electrocardiography, continuous in-hospital cardiac monitoring, exercise testing, tilt testing, T wave alternans and relevant imaging studies,
- Indications for, techniques and interpretation of diagnostic intracardiac electrophysiologic studies, and techniques of performing these studies,
- Indications for, techniques and effects of noninvasive therapeutic techniques, including esophageal and transcutaneous pacing, cardioversion, defibrillation, and cardiopulmonary resuscitation,
- Indications for, techniques and effects of invasive therapeutic techniques, including pacemaker and cardioverter-defibrillator implantation and catheter and surgical ablation of/for arrhythmias,
- Pharmacology, pharmacokinetics, and use of antiarrhythmic agents and other drugs that affect cardiac electrical activity.

Conferences specific to the CCEP fellowship include:

### Clinical EP Teaching Rounds

- Objective: To present current arrhythmia inpatients to the EP service and discuss diagnosis and management strategies.
- Teaching Method: Participants will be principally taught by the supervising CCEP attending physician and other CCEP faculty. Instruction and experience will be provided at the bedside using interactive discussion.

Bedside teaching rounds will be conducted on arrhythmia inpatients on the cardiology and consult services on Mondays at 10:00 AM, beginning in the CCU. Attending physicians, CCEP fellows, Cardiology fellows on the EP service, nurses, physicians' assistants and research associates will attend. Cases will be presented by the CCEP and Cardiology fellows and discussed by the group as a whole. Rationale for diagnosis and management will be emphasized and alternative strategies debated. Underlying organic heart disease and comorbidities, pharmacokinetics, drug interactions, and ethical considerations will be discussed as applicable to the individual case. Attendance is required except when a fellow is immediately needed for the care of a specific patient.

#### CCEP Core Lecture

**Objective:** To supplement academic areas covered in clinical rotations and provide a well-rounded foundation in both basic and clinical cardiac electrophysiology. Emphasis will be placed on basic electrophysiology, autonomic nervous control of the heart, pharmacology, pacing and defibrillation physics and technology, ablation physics and technology and clinical research and trials.

**Teaching Method:** Core lectures will be primarily didactic, however audience participation with appropriate questions and responses is encouraged.

On the 1<sup>st</sup> Thursday of each month at 4:00 PM in the Hermann Heart Center conference room, CCEP fellows and Cardiology fellows rotating on the EP service will attend a lecture on electrophysiology topics with an emphasis on topics not fully covered on the clinical rotations or in other conferences. Attendance is mandatory.

#### EP Journal Club

**Objective:** To review the current literature in cardiac electrophysiology, develop skills in critical scientific and statistical analysis and ethical considerations. Implications of new findings for development of ongoing and future research projects will be discussed.

**Teaching Method:** Fellows will prepare material for oral presentation to the group, using visual aids as appropriate. Open discussion will follow.

On the 2<sup>nd</sup> and 4<sup>th</sup> Thursdays of each month at 4:00 PM in the Hermann Heart Center conference room, the CCEP fellows and Cardiology fellows on the EP rotation will meet with attending physicians to review current journal articles. Each fellow will be responsible for presenting an article, with particular attention to methods, statistical analysis and results. Discussion will include a critical appraisal of the methods and ethics and discussion of the importance of the findings. Attendance is mandatory.

#### EP Case Studies

**Objective:** To review in depth interesting invasive EP procedures and analyze results, with emphasis on mechanisms of arrhythmogenesis and effective diagnostic and therapeutic maneuvers. Patient outcomes will also be discussed in order to review and optimize morbidity and mortality.

**Teaching Method:** Fellows will prepare material for oral presentation to the group using intracardiac recordings and other pertinent materials. Group discussion will follow.

The same group will meet on the 3<sup>rd</sup> and 5<sup>th</sup> Thursdays of each month in the Hermann Heart Center Conference Room for a detailed discussion of interesting and instructive invasive EP cases. Each fellow will be responsible for assembly of materials to present a case to the group, beginning with history and

physical exam, pertinent ECG's and labs, intracardiac tracings and noncontact maps. All adverse outcomes of all invasive studies will be presented at the following conference and discussed by the group. Attendance is mandatory.

#### EP/ ECG Conference

Objective: To provide formal didactic instruction in arrhythmias, arrhythmia syndromes, and their management for general cardiology and CCEP fellows, and to emphasize strategies in arrhythmia diagnosis.

Teaching Method: Both didactic lectures and interactive group discussion in a quiz format will be employed.

The Electrophysiology Conferences are designed to aide fellows in recognizing, diagnosing and selecting the most appropriate treatment for arrhythmias from the rapidly changing field of electrical, pharmacological and surgical modalities. Approximately one-half of the conferences are didactic in nature and one-half are interactive, usually employing surface and intracardiac recordings for group analysis. Each CCEP fellow is expected to prepare and present at least one didactic conference on a topic in cardiac electrophysiology during the academic year. (Alternatively, this presentation may be made at Cardiology Grand Rounds.) Conferences are each Tuesday at 12:00 p.m. in the Heart Center Conference Room and are mandatory for all CCEP fellows and rotating cardiology fellows.

The following conferences are presented for the benefit of all members of the Division of Cardiology and include arrhythmia and electrophysiology topics:

#### Core Lecture Series

A core series of didactic lectures on the main topics in cardiovascular medicine will be given every Thursday from 7:00 to 8:00 AM in the Heart Center Conference Room. Attendance by CCEP fellows is encouraged. The lectures begin in August and run through June.

#### Dr. Willerson's Conference

In addition to the Core Lecture Series, Dr. Willerson will meet with all fellows to review selected topics in cardiology on every third Thursday from 6:00 to 7:00 PM in the Kirkendall Library, Room I.150 MSB. A list of exact dates is published by the Chairman's office.

#### Dr. Smalling's Hemodynamic Conference

A didactic hemodynamic conference is held every Tuesday morning from 7:00 to 8:00 AM by Dr. Smalling or one of the other catheterization attendings in the Hermann Heart Center Conference Room. A cardiac catheterization fellow will present a case, which will be discussed in detail, with regard to critical evaluation of hemodynamics, imaging physics, invasive monitoring, and specific procedural considerations. CCEP fellows are encouraged to attend.

#### Medical Grand Rounds

Tuesdays, 1:00 p.m., Room 3.001 MSB

All fellows are expected to attend except when dealing with clinical emergencies.

#### Clinic-Pathological Conference

Mondays, 12:00 noon, MSB 3.001. All fellows are encouraged to attend.

Cardiac Catheterization Conference

Thursdays 5:00-6:00 p.m. in 2103 MSB. The cath fellows will present history, physical exam, labs, EKGs, x-rays, noninvasive studies and the actual cath films. Usually, two or three cases are presented and discussed with the medical and surgical staff. CCEP fellows are encouraged to attend.

Noninvasive Conference

Fridays, 12:00 p.m., Heart Center Conference Room. The conference is designed to offer cardiology fellows a comprehensive survey of noninvasive cardiology including basic and advanced cardiovascular ultrasound concepts and technology, advanced echocardiography, nuclear cardiology, case presentation with significant educational content and ongoing cardiovascular research presented by the fellows and their faculty mentor. Material from the American College of Cardiology Self-Assessment Program will be discussed to help prepare for the board exam in cardiovascular medicine. Lunch is usually provided. CCEP fellows are encouraged to attend.

Cardiovascular Grand Rounds

Thursdays, 12:00 noon, Room 2.135. These are special lectures often presented by guest speakers with a clinical emphasis. CCEP fellows are expected to attend.

Morbidity and Mortality (M&M) Conference

M&M Conferences are held in conjunction with the cardiology staff meeting on every first Monday of the month from 5:00 to 6:00 PM in the Birch Room, Hermann Hospital. All fellows on the clinical services are expected to attend.

## ANCILLARY COURSES

### Advanced Cardiac Life Support (ACLS)

ACLS certification is required for all fellows, and it is the fellow's responsibility to keep certification current. Courses are offered through the Hermann Hospital Life Flight Office. Registration forms for the course can be obtained at the Life Flight Office, Robertson Pavilion, phone (713) 704-4014. A list of additional courses offered in the Houston area is available through the American Heart Association at (713) 610-5000.

### Radiation Safety Course

The UTHSC Radiation Safety Division offers a short course in Radiation Safety several times a year. It is expected that each fellow will complete this course successfully within the first three months of his/her first year of the Cardiology fellowship. CCEP Fellows who have not already completed this course or an equivalent one at another institution will also be required to do so within the first three months of the first year. Call (713) 500-5840 to enroll.





## 2002-2003 Cardiology Didactic Schedule

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
AM	10:00 Clinical EP Teaching Rounds CCU	7:00 Hemodynamics Conference Bush Center Conference Rm		7:00 Cardiology Core Lecture Bush Center Conference Rm	
PM	12:00 Molecular Medicine Conference Bush Center Conference Rm  5:00 Morbidity & Mortality Conference Birch Rm  6:00 Cardiology Service Mtg (1 <sup>st</sup> Monday) Cullen Board Rm	12:00 EP/ECCG Conference Bush Center Conference Rm		12:00 Cardiology Grand Rounds MSB 2.135  4:00 CCEP Core Lecture (1 <sup>st</sup> Thursday) EP Journal Club (2 <sup>nd</sup> & 4 <sup>th</sup> Thursdays) EP Case Studies (3 <sup>rd</sup> & 5 <sup>th</sup> Thursdays) Bush Center Conference Rm  5:00 Cath Conference MSB 2.103  6:00 Dr. Willerson's Conference (3 <sup>rd</sup> Thursday) Kirkendall Library	12:00 Non-invasive Cardiology Conference Bush Center Conference Rm