Vascular Interventional Radiology Fellowship Procedure and Training Manual

Christiana Care Health System
4755 Ogletown-Stanton Road
Newark, Delaware 19718

Phone: (302) 733-5625
Fax: (302) 733-5665

Program Director
Dr. Daniel Leung, MD FSIR

Associate Program Director
Dr. Demetrios Agriantonis, MD

Faculty
Dr. Mark Garcia, MD FSIR
Dr. George Kimbiris, MD
Dr. Randall Ryan, MD
Dr. Michael Dignazio, MD

Program Coordinator
Joann P. Scurti

VASCULAR INTERVENTIONAL

RADIOLOGY

FELLOWSHIP EDUCATION

GENERAL GOALS

To provide Interventional Radiology Fellows with an organized, comprehensive, supervised, full-time educational experience in vascular interventional radiology including the ability to provide consultation and case selection, perform the full array of vascular and interventional procedures, identify and manage potential complications, provide appropriate peri-procedure care, and assist in long-term management integrated with the clinical management of referring physicians.

OBJECTIVES

1. Establish a firm foundation of clinical knowledge and technical expertise upon which to base further personal development in the field of vascular and interventional radiology.

2. Provide a supervised, graduated clinical experience in interpreting and performing all studies encompassed by the specialty of vascular and interventional radiology.

3. Provide a committed faculty dedicated to educating and stimulating trainee physicians to achieve excellence in their clinical practice.

4. Develop familiarity with the signs and symptoms of disease entities amenable to the diagnosis with vascular imaging and/or treatment by vascular interventional radiology techniques.

5. Develop an understanding of the pathophysiology and natural history of the disease processes frequently encountered in this subspecialty and the medical, surgical, and interventional radiologic treatment alternatives for these various disorders.

6. Develop an understanding of common vascular interventional radiology research methods and study design as well as common pitfalls to clinical research.

7. Develop an understanding of the indications for and the contraindications to vascular and interventional radiology procedures.

8. Learn to perform and skillfully implement the clinical and technical aspects of these procedures to maximize their safe utilization.

9. Recognize and treat complications during and after vascular and interventional radiology procedures.

10. Learn to utilize the information gleaned from presentation of complicated cases at peer-review and M&M conferences to promote improved patient safety and outcomes.

11. Administer and maintain effective and safe conscious sedation for patient comfort during and after vascular and interventional radiology procedures.

12. Develop expertise at interpreting diagnostic and interventional radiologic studies and providing consultation to clinical services.

13. Understand Doppler ultrasound, CTA, MRA, and conventional angiography and how they are best used for diagnostic evaluation.

14. Develop a complete understanding of the fundamentals of radiation physics, radiation biology, and radiation protection as they relate to vascular interventional radiology.

15. Understand occupational hazards related to the practice of vascular interventional radiology and learn how to avoid or minimize them.

16. Provide appropriate patient follow-up in the inpatient and outpatient setting.

17. Serve as a learning resource for medical students, residents, and ancillary medical staff and become actively involved with teaching of residents and medical students.

18. Become intimately involved with and develop an understanding for the pre-procedure evaluation and post-procedure care of patients undergoing diagnostic and interventional radiology procedures including the attitude that involvement with a patient's care begins with the initial consultation.

19. Develop the habit of routinely surveying the medical literature and using this knowledge in patient care. This should be done before any type of procedure or with any clinical presentation with which you are not completely familiar.

20. Recognize and promote a team environment in the practice of interventional radiology including radiology technologists, nurses, patient care coordinators and midlevel providers.

21. Develop a bedside manner that is appropriate and meets the needs of the patient and provides a thorough patient assessment.

22. Demonstrate a knowledge of and attitude for ethical practice.

23. Have consistently professional behavior and good communication skills.

COMPETENCIES

In addition to these objectives, the fellows must demonstrate competency in each of the following six categories of objectives, as defined by the ACGME. These competencies will be evaluated through (1) daily interaction with patients, staff and attending physicians (as recorded in evaluation forms), (2) case logs, (3) quarterly evaluations, and (4) conference and journal club presentations.

Patient Care

Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Housestaff are expected to:

- communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families
- gather essential and accurate information about their patients seen in consultation, prior to procedures, or in follow-up
- make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment
- develop and carry out patient management plans
- counsel and educate patients and their families
- use information technology to support patient care decisions and patient education
- perform competently all medical and invasive procedures considered essential for the area of practice
- provide health care services aimed at preventing health problems or maintaining health
- work with health care professionals, including those from other disciplines, to provide patient-focused care

Medical Knowledge

Fellows must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Fellows are expected to:

- demonstrate an investigatory and analytic thinking approach to clinical situations commonly seen in Interventional Radiology
- know and apply the basic and clinically supportive sciences which are required for Interventional Radiology

Practice-Based Learning And Improvement

Fellows must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Fellows are expected to:

- analyze practice experience and perform practice-based improvement activities using a systematic methodology
- locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems
- obtain and use information about their own population of patients and the larger population from which their patients are drawn
- apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness
- use information technology to manage information, access on-line medical information; and support their own education
- facilitate the learning of students and other health care professionals

Interpersonal And Communication Skills

Fellows must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, patients' families, and professional associates. Fellows are expected to:

- create and sustain a therapeutic and ethically sound relationship with patients
- use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills
- work effectively with others as a member or leader of a health care team or other professional group

Professionalism

Fellows must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Fellows are expected to:

- demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development
- demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices

- demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities

Systems-Based Practice

Fellows must 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. Fellows are expected to:

- understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice
- know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources
- practice cost-effective health care and resource allocation that does not compromise quality of care
- advocate for quality patient care and assist patients in dealing with system complexities
- know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance

CURRICULUM

Daily Patient Review occurs each morning at 7:00 am. The attending that is on call for the upcoming weekend is typically responsible for patient review and rounds during the week. Rounds will be delayed if there is a conference in the morning. For example, on Wednesday mornings there is a didactic lecture (or journal club/peer-review conference) and Thursday mornings there is Tumor Board conference at the cancer center. Fellows and midlevel providers are required to round on all VIR patients on a daily basis, with or without attendings. Fellows should preferentially round on patients that they are following (i.e. performed a procedure/consultation on) in order to ensure continuity of care. Midlevel providers and fellows are also responsible for outpatient pre-evaluations in the prep-and-hold area. Daily communication between fellows and midlevel providers is crucial to ensure all clinical activities are completed while avoiding unnecessary duplication. The VIR fellows are in the HVIS procedure area every day except for the days that they are scheduled on the CT-guided biopsy/drainage service and the non-invasive vascular imaging service. They also spend approximately one day per week doing inpatient consultations or outpatient clinic visits.

Procedures:

Procedure Planning:

Outpatient pre-procedure patient evaluation in the prep-and-hold area includes a short disease-oriented history and physical, review of imaging and labwork as well as medications and allergies, and obtaining consent. The case should also be reviewed with the attending physician.

Procedures:

The fellows perform diagnostic and interventional radiology procedures with educational interaction with our attending physicians and referring physicians. They may have the opportunity to supervise radiology residents in these procedures.

Post-procedure checklist:

1. Post-procedure paper work
2. Post-procedure orders: EMR for inpatients and written for outpatients.
3. Post-procedure note in the chart
4. Coding (with the attending)
5. Dictation: should be completed the same day.

Consultation:

The fellow is responsible for inpatient consultations approximately one day per week. The fellow may get involved with procedures on those days but must make sure the consult pager is covered and answered promptly. Consultations are always performed under the supervision of an attending physician. All consultations require a complete consult note or dictation to be countersigned by the attending physician.

Clinic:

The fellow also spends approximately half a day per week in the outpatient clinic during the second and third quarters of the year. This allows the fellow to perform the procedure and see the patient in follow up within the fellowship year. As with inpatient consultations, all clinic visits are performed under the supervision of an attending physician and require a dictated letter to the referring physician.

Non-invasive vascular Imaging:

Fellows are assigned to the non-invasive vascular imaging service for 2-4 weeks during the year. This includes supervised reading of MRA, CTA and vascular lab studies. Vascular ultrasound studies from the vascular lab are read with Dr. Dignazio on the days

that he is working (typically Mon, Wed, and Fri) and with one of the other VIR attendings on the other days. MRA and CTA studies are supervised by Dr. Gakhal.

Biopsies and drainage procedures:

Fellows are assigned to the CT-guided biopsy and drainage procedure for 2-4 weeks during the year, where they will work primarily with Dr. Ryan.

Basic Life Support and Advanced Cardiac Life Support

Fellows must maintain current competence in BLS and ACLS. These should be completed prior to starting the fellowship. Copies of the certificates of completion need to be on file with the fellowship coordinator.

Weekly Core Lecture

Attendance is mandatory at the weekly, Wednesday morning core lecture held throughout the year. The second and third Wednesday of each month will be journal club and peer-review conference, respectively.

Journal Club

Breakfast journal club is held every second Wednesday of each month throughout the year. Two hypothesis-driven, peer-reviewed manuscripts from the current literature are selected by Dr. Kimbiris and presented by the fellows. The presentation should include a thorough analysis of the research methods as well as the strengths and weaknesses of the paper reviewed.

Peer-review Conference

Peer-review conference is held every third Wednesday of the month and is attended by the entire VIR team, including attendings, fellows, and midlevel providers. Fellows are expected to present cases in which they were involved.

Case Log

Fellows are to keep an electronic record of their cases, complications, and outcomes in a database, such as that available through New Innovations. The log must be kept up to date and will be reviewed regularly with the Program Director.

REQUIRED CONFERENCES

1. Monthly peer-review conference held on the third Wednesday of each month at 07:00 a.m. in the Radiology Conference Room. Fellows must present complicated cases in which they were involved. Images can be supplied using the PACS system.

2. Monthly journal club held on the second Wednesday of each month at 07:00 a.m. in the Hilton Hotel breakfast room. The fellows are required to critically review one article each for each meeting. They should learn research methods, statistical analysis and review relevant literature

3. Weekly core curriculum lecture held every Wednesday (except the second and third Wednesday) at 7:00 a.m. in the Radiology Conference Room. The last sessions of the year will be presentations by the fellows.

4. Weekly interdisciplinary Tumor Board conference held every Thursday morning at 7:00 a.m. in the cancer center conference room.

5. Monthly interdisciplinary vascular lab conference held every first Friday morning at 7:00 a.m. in the Ammon Center room 14.

6. Fellowship statistical seminars with cardiology fellows; series of seven lectures on research methodology and statistics held in the HVIS conference room.

7. Radiology resident VIR lectures held on Monday and Tuesday mornings at 7 a.m.

TEACHING

The fellows actively participate in teaching of medical students and radiology residents, both during procedures and at film interpretation sessions.

RESEARCH

All fellows are required to participate in scholarly activities. Presentations for journal club also count as scholarly activity. All fellows will participate with ongoing clinical research projects by acquiring appropriate protocol data and consents from patients. Fellows are strongly encouraged to participate in on-going research or conduct their own basic science, translational or clinical research. Research resulting in a scientific presentation or manuscript is strongly encouraged. Fellows may also be given the opportunity to write book reviews, review articles, or book chapters.

CALL

Fellows take home call one day per week and one weekend per month. If they are called in to the hospital during weekday call, they will leave at noon the next day. Likewise, they will leave at noon on Mondays after weekend call.

SUPERVISION

Make certain an attending is engaged in every consult or procedure before you start. All VIR procedures are performed under direct supervision until the fellows have demonstrated competence. Minor procedures, such as paracentesis, venous access and feeding tube replacement, in which the fellows have demonstrated competence, can be performed under indirect supervision with the attending physician immediately available. For all complex or high-risk procedures, the attending physician needs to be present for the key portions of the procedure. The attending physician will determine what the key portions of a given procedure are.

EVALUATION

Evaluation of the fellows is performed as follows:

1. Fellows have a list of expected clinical competencies to complete each quarter. These are checked off by the program director at quarterly evaluations. Requirements for subsequent quarters can be completed early. The list of competencies is attached to the end of this section.

2. 360 degree evaluation of fellows by patients, staff and self.

3. Fellows are evaluated by all attending physicians on a quarterly basis.

4. Fellow performance in conference and on a case-by-case basis is also evaluated by the faculty throughout the duration of the fellowship.

5. Program director reviews the case log with the fellows at quarterly evaluations.

6. Fellows are able to evaluate the fellowship in quarterly meetings with the fellowship director and in written evaluations.

Examples of the evaluation forms used by the patients, staff, and faculty can be found in the following section. The program director will discuss the results of these evaluations with the individual fellows on a quarterly basis.

DURATION OF TRAINING

Following completion of an ACGME Accredited Residency Program in Diagnostic Radiology (or its FMG equivalent with ECFMG certification), our fellowship will be a minimum of one year of postgraduate education in vascular and interventional radiology. An extended leave of absence will require additional training time.

DUTY HOURS

Duty hours are defined as time spent on educational and clinical activities related to the residency program, including patient care, administrative duties related to patient care and academic activities. Specific provisions include:

1. Fellows must not exceed 80 hours per week, although this can be averaged over 4 weeks.

2. Fellows must have at least one full (24-hour) day out of seven free of all patient care, educational and administrative duties, averaged over four weeks.

3. Fellows should have 10 hours, and must have 8 hours, free of duty between scheduled duty periods. They must have at least 14 hours free of duty after 24 hours of in-house duty.

4. Time spent in the hospital by fellows on at-home call must count toward the 80-hour maximum weekly hour limit. The frequency of at-home call is not subject to the every-third-night limitation but must satisfy the requirement for one day in seven free of duty, when averaged over four weeks.

5. Residents are permitted to return to the hospital while on a-home call to care for new or established patients. Each episode of this type of care, while it must be included in the 80-hour weekly maximum, will not initiate a new “off-duty period.”

6. Duty Hours must be kept up to date on the New Innovations website.

Fellows must adhere to these rules. Failure to record duty hours will be discussed with Program Director. Repeated problems will appear on Fellows evaluation.

The work hours will be reviewed monthly. Fellows will receive notification if not in compliance.

Individual fellows are expected to take corrective action, but repeated overage will lead to disciplinary action. Fellows should review the CCHS housestaff manual for additional institutional information on duty-hours.

MOONLIGHTING

In-house moonlight counts toward the weekly work-hour limit. In addition, program director must ensure that external and internal moonlighting does not interfere with the fellow's achievement of the program's educational goals and objectives.

Moonlighting must be discussed and approved by program director and follow the guidelines set forth by the CHS GME committee (see housestaff manual). If moonlighting should interfere with Fellows training, the program director will discuss the problem with the Fellow; if problem persist, disciplinary action will be taken.

VACATION / MEETINGS

Fellows have three weeks of vacation (plus one week at Christmas or New Year's), but no vacation can be utilized during the last two weeks of the fellowship-training period. No vacation will be approved during meetings, seminars, or other organized events that have involvement of our resident, fellow, or attending physicians (e.g. CIRSE, RSNA, ISET, AUR, SIR).

CCHS allocates 5 days annually to each fellow to attend scientific meetings and provides funding for one national meeting of their choice. Days spent beyond the 5 days count towards vacation time unless the fellow is presenting a scientific paper. There is additional departmental funding available for a second meeting if the fellow is presenting an original scientific paper.

All vacation time must be pre-approved. Written notification of a request for vacation time must be provided to the Director of the Division prior to the vacation.

Otherwise, benefits, grievance policy, salary, vacation time, sick leave, maternity and paternity leave, moonlighting, and duty hours as defined by the CCHS academic affairs office.

COMPLETION OF FELLOWSHIP

At completion of the fellowship, a final evaluation will be reviewed with the program director. Please provide the program director with a completed evaluation of the fellowship. Additional graduation requirements are as per the housestaff office. Also, please inform the fellowship administrative coordinator of your forwarding address, and the date at which you will take your certificate of added qualification examination.

RECOMMENDED READING

Kauffman J. Interventional Radiology, 2004

Valji K. Vascular and Interventional Radiology. 2007. W.B. Saunders

Abrams HL. Abrams Angiography: Vascular and Interventional Radiology. 4rd Ed., editors: Baum S, Pentecost M, Vol I-III, Little Brown and Co., 2003.

Mauro M. Image Guided Interventions. 2008.

Seminars in Interventional Radiology

JVIR

CVIR

J Vascular Surgery

Techniques in Interventional Radiology

CLINICAL COMPETENCIES

The following is a list of the clinical competencies to be completed by VIR fellows by the end of each quarter. The completion of these competencies will be evaluated at quarterly evaluations. Competencies for a subsequent quarter can be completed early.

First quarter:

1. Perform basic inpatient VIR consult including history, physical exam with documentation
2. Perform an appropriate vascular examination in patients with PVD
3. Present concise and thorough history for standard VIR patients
4. Demonstrate consistent site marking prior to procedures
5. Informed consent for standard VIR procedures
6. Reliably communicate with housestaff from referring services after procedures
7. Sign off on patients with appropriate follow-up plan
8. Perform standard admission
9. Demonstrate competence in peripherally inserted central catheters
10. Demonstrate competence in routine femoral arterial access and aortography
11. Demonstrate competence in standard tunneled line placement

Second quarter

1. Run efficient rounds
2. Perform complex VIR consults such as PTC, embolotherapy or TIPS including discussion with referring physicians where appropriate
3. Perform outpatient consults and dictate a clinic note
4. Be able to initiate and monitor a thrombolysis case
5. Demonstrate competence in venous PTA cases (peripheral and central)
6. Demonstrate competence in Iliac angioplasty and stenting
7. Demonstrate competence in percutaneous nephrostomy
8. Demonstrate competence in port placement
9. Discharge floor patients with discharge summary and appropriate follow up
10. Demonstrate adequate VIR radiation safety
11. Lead challenging family discussions when needed

Third quarter

1. Perform outpatient follow-up visits and dictate a clinic note
2. Perform on-call triage and patient management efficiently and reliably
3. Understand vascular doppler techniques and demonstrate competence in image interpretation
4. Demonstrate competence in uterine artery embolization
5. Demonstrate competence in PCN access for lithotripsy
6. Demonstrate competence in percutaneous transhepatic cholangiography and drainage
7. Demonstrate competence in pharmacomechanical thrombolysis for DVT
8. Demonstrate competence in venous stenting
9. Demonstrate competence in basic femoropopliteal arterial angioplasty and stenting

Fourth quarter

1. Demonstrate competence in CT-guided tumor ablation
2. Demonstrate competence in transjugular intrahepatic portosystemic shunt placement

3. Demonstrate competence in biliary stenting
4. Demonstrate competence in complex lower extremity revascularization including tibial intervention
5. Demonstrates ability to identify and manage potential complications
6. Demonstrate competence in renal and mesenteric angioplasty and stenting
7. Demonstrate competence in embolotherapy for GI bleeding
8. Demonstrate competence in embolotherapy for trauma
9. Demonstrate competence in managing procedural and interdisciplinary aspects of trauma intervention
10. Understand indications and techniques for MRA and CTA and demonstrate competence in interpretation

SELF 360 Degree Evaluation Form

You are giving feedback for: _____
Date: _____

Please circle your response.
1 – Poor, 2 – Fair, 3 – Average, 4 – Good, 5 – Excellent

PROFESSIONALISM:

Is committed to high standards of professional conduct: 1 2 3 4 5

Treats patients with respect: 1 2 3 4 5

Treats staff with respect: 1 2 3 4 5

INTERPERSONAL AND COMMUNICATION SKILLS:

Communicates effectively with patients and staff: 1 2 3 4 5

Answers pages promptly: 1 2 3 4 5

SYSTEM-BASED PRACTICE:

Optimizes coordination of patient care within the healthcare system: 1 2 3 4 5

PATIENT CARE:

Provides safe and efficient patient care: 1 2 3 4 5

Communicates results in a timely manner: 1 2 3 4 5

MEDICAL KNOWLEDGE:

Demonstrates appropriate knowledge base when making patient care decisions: 1 2 3 4 5

Engages in continuous learning: 1 2 3 4 5

PRACTICE BASED LEARNING AND IMPROVEMENT:

Is receptive to feedback: 1 2 3 4 5

Uses scientific evidence to optimize patient care: 1 2 3 4 5

COMMENTS:

_____

_____

PATIENT EVALUATION OF THE RESIDENT PHYSICIAN

RESIDENT_____Date_____

Questions	**No**	Sometimes	**Yes**
Do you feel that your doctor treated you with respect?			
Do you feel that your doctor answered your questions?			
Do feel that your doctor explained things to you in words that you understand?			
Do feel that your doctor was concerned about you?			
Would you recommend your doctor to your friends?			

Comments:

PHYSICIAN 360 Degree Evaluation Form

You are giving feedback for: _____
Date: _____

Please circle your response.
1 – Poor, 2 – Fair, 3 – Average, 4 – Good, 5 – Excellent

PROFESSIONALISM:

Is committed to high standards of professional conduct:	1	2	3	4	5
Treats patients with respect:	1	2	3	4	5
Treats staff with respect:	1	2	3	4	5

INTERPERSONAL AND COMMUNICATION SKILLS:

Communicates effectively with patients and staff:	1	2	3	4	5
Answers pages promptly:	1	2	3	4	5

SYSTEM-BASED PRACTICE:

Optimizes coordination of patient care within the healthcare system:	1	2	3	4	5

PATIENT CARE:

Provides safe and efficient patient care:	1	2	3	4	5
Communicates results in a timely manner:	1	2	3	4	5

MEDICAL KNOWLEDGE:

Demonstrates appropriate knowledge base when making patient care decisions:	1	2	3	4	5
Engages in continuous learning:	1	2	3	4	5

PRACTICE BASED LEARNING AND IMPROVEMENT:

Is receptive to feedback:	1	2	3	4	5
Uses scientific evidence to optimize patient care:	1	2	3	4	5

COMMENTS:

_____

_____

VIR Lecture Schedule for Radiology Residents
Academic Year 2011-2012

July/2011

07/05/11	IR Basics: Intro to IR	Dr. Leung
07/07/11	VIR Tumor Board	Multidisciplinary Cancer Team
07/11/11	VIR: Basic Angiography, Part I	Dr. Horvath
07/13/11	VIR Journal Club	VIR Staff
07/14/11	VIR Tumor Board	Multidisciplinary Cancer Team
07/15/11	Multidisciplinary Endovascular M&M	Multidisciplinary Endovascular Team
07/20/11	VIR QA and Peer Review	VIR Staff
07/21/11	VIR Tumor Board	Multidisciplinary Cancer Team
07/25/11	VIR: Basic Angiography, Part II	Dr. Horvath
07/27/11	Patient Care	Dr. Garcia
07/28/11	VIR Tumor Board	Multidisciplinary Cancer Team

August/2011

08/02/11	Reducing Occupational Hazards	Dr. Leung
08/04/11	VIR Tumor Board	Multidisciplinary Cancer Team
08/05/11	Vascular US: Case Review	Multidisciplinary Vascular US Team
08/08/11	Central Venous Access, Part I	Dr. Horvath
08/11/11	VIR Tumor Board	Multidisciplinary Cancer Team
08/17/11	VIR QA and Peer Review	VIR Staff
08/18/11	VIR Tumor Board	Multidisciplinary Cancer Team
08/19/11	Multidisciplinary Endovascular M&M	Multidisciplinary Endovascular Team
08/22/11	Central Venous Access, Part I	Dr. Horvath
08/25/11	VIR Tumor Board	Multidisciplinary Cancer Team

September/2011

09/01/11	VIR Tumor Board	Multidisciplinary Cancer Team
09/02/11	Vascular US: Case Review	Multidisciplinary Vascular US Team
09/06/11	Interventional Radiology Clinical Practice	Dr. Garcia
09/08/11	VIR Tumor Board	Multidisciplinary Cancer Team
09/12/11	GI Interventions	Dr. Horvath
09/14/11	VIR Journal Club	VIR Staff
09/15/11	VIR Tumor Board	Multidisciplinary Cancer Team
09/16/11	Multidisciplinary Endovascular M&M	Multidisciplinary Endovascular Team
09/21/11	VIR QA and Peer Review	VIR Staff
09/22/11	VIR Tumor Board	Multidisciplinary Cancer Team
09/26/11	GU Interventions	Dr. Horvath
09/28/11	Vascular Diagnosis/Thoracic Aorta and Upper Extremities	Dr. Kimbiris
09/29/11	VIR Tumor Board	Multidisciplinary Cancer Team

October/2011

10/04/11	Vascular Diagnosis/Abdominal Aorta and Iliac Systems	Dr. Leung
10/06/11	VIR Tumor Board	Multidisciplinary Cancer Team
10/07/11	Vascular US: Case Review	Multidisciplinary Vascular US Team

10/10/11	VIR IVC Filters	Dr Horvath
10/12/11	VIR Journal Club	VIR Staff
10/13/11	VIR Tumor Board	Multidisciplinary Cancer Team
10/19/11	VIR QA and Peer Review	VIR Staff
10/20/11	VIR Tumor Board	Multidisciplinary Cancer Team
10/21/11	Multidisciplinary Endovascular M&M	Multidisciplinary Endovascular Team
10/24/11	VIR Mesenteric Vascular Disease	Dr. Horvath
10/27/11	VIR Tumor Board	Multidisciplinary Cancer Team

November/2011

11/01/11	Vascular Diagnosis/Evaluation of Patients after Vascular Reconstruction Bypass	Dr. Garcia
11/03/11	VIR Tumor Board	Multidisciplinary Cancer Team
11/04/11	Vascular US: Case Review	Multidisciplinary Vascular US Team
11/09/11	VIR Journal Club	VIR Staff
11/10/11	VIR Tumor Board	Multidisciplinary Cancer Team
11/14/11	VIR TIPS	Dr. Horvath
11/16/11	VIR QA and Peer Review	VIR Staff
11/17/11	VIR Tumor Board	Multidisciplinary Cancer Team
11/18/11	Multidisciplinary Endovascular M&M	Multidisciplinary Endovascular Team
11/23/11	Vascular Diagnosis/Gastrointestinal Tract Vascular Evaluation	Dr. Kimbiris
11/24/11	VIR Tumor Board	Multidisciplinary Cancer Team
11/28/11	VIR Vasculitis	Dr. Horvath

December/2011

12/01/11	VIR Tumor Board	Multidisciplinary Cancer Team
12/02/11	Vascular US: Case Review	Multidisciplinary Vascular US Team
12/06/11	Vascular Intervention/Liver, Spleen & Pancreatic Angiographic Studies	Dr. Leung
12/08/11	VIR Tumor Board	Multidisciplinary Cancer Team
12/12/11	VIR Coils and Plugs	Dr. Horvath
12/14/11	VIR Journal Club	VIR Staff
12/15/11	VIR Tumor Board	Multidisciplinary Cancer Team
12/16/11	Multidisciplinary Endovascular M&M	Multidisciplinary Endovascular Team
12/21/11	VIR QA and Peer Review	VIR Staff
12/22/11	VIR Tumor Board	Multidisciplinary Cancer Team
12/26/11	VIR Portal Vein Embolization	Dr. Horvath
12/29/11	VIR Tumor Board	Multidisciplinary Cancer Team

January/2012

01/03/12	Vascular Intervention/Renal Vascular Disease	Dr. Garcia
01/05/12	VIR Tumor Board	Multidisciplinary Cancer Team
01/06/12	Vascular US: Case Review	Multidisciplinary Vascular US Team
01/09/12	VIR Obstetrical Emergencies	Dr. Horvath
01/11/12	VIR Journal Club	VIR Staff
01/12/12	VIR Tumor Board	Multidisciplinary Cancer Team
01/18/12	VIR QA and Peer Review	VIR Staff
01/19/12	VIR Tumor Board	Multidisciplinary Cancer Team
01/20/12	Multidisciplinary Endovascular M&M	Multidisciplinary Endovascular Team

01/23/12	O_2 in Interventional Oncology and GI Bleeding	Dr. Horvath
01/25/12	Vascular Intervention/Mesenteric Vascular Disease	Dr. Kimbiris
01/26/12	VIR Tumor Board	Multidisciplinary Cancer Team

February/2012

02/02/12	VIR Tumor Board	Multidisciplinary Cancer Team
02/03/12	Vascular US: Case Review	Multidisciplinary Vascular US Team
02/06/12	VIR Board Review	Dr. Horvath
02/07/12	Vascular Intervention/Carotid Vascular Disease	Dr. Leung
02/08/12	VIR Journal Club	VIR Staff
02/09/12	VIR Tumor Board	Multidisciplinary Cancer Team
02/13/12	VIR DVT Thrombolysis	Dr. Horvath
02/15/12	VIR QA and Peer Review	VIR Staff
02/16/12	VIR Tumor Board	Multidisciplinary Cancer Team
02/17/12	Multidisciplinary Endovascular M&M	Multidisciplinary Endovascular Team
02/20/11	VIR Board Review	Dr. Horvath
02/23/12	VIR Tumor Board	Multidisciplinary Cancer Team
02/27/12	VIR Clinical Updates in HCC	Dr. Horvath

March/2012

03/01/12	VIR Tumor Board	Multidisciplinary Cancer Team
03/02/12	Vascular US: Case Review	Multidisciplinary Vascular US Team
03/05/12	VIR Board Review	Dr. Horvath
03/06/12	Vascular Interventional/Management of Hepatic Malignancy	Dr. Garcia
03/08/12	VIR Tumor Board	Multidisciplinary Cancer Team
03/12/12	VIR Vertebroplasty	Dr. Horvath
03/14/12	VIR Journal Club	VIR Staff
03/15/12	VIR Tumor Board	Multidisciplinary Cancer Team
03/16/12	Multidisciplinary Endovascular M&M	Multidisciplinary Endovascular Team
03/19/12	VIR Board Review	Dr. Horvath
03/21/12	VIR QA and Peer Review	VIR Staff
03/22/12	VIR Tumor Board	Multidisciplinary Cancer Team
03/26/12	VIR CO 2 Angiography	Dr. Horvath
03/28/12	Vascular Intervention/Gynecologic Interventions	Dr. Kimbiris
03/29/12	VIR Tumor Board	Multidisciplinary Cancer Team

April/2012

04/02/12	VIR Board Review	Dr. Horvath
04/03/12	Vascular Intervention/Trauma Interventions	Dr. Leung
04/05/12	VIR Tumor Board	Multidisciplinary Cancer Team
04/06/12	Vascular US: Case Review	Multidisciplinary Vascular US Team
04/09/12	VIR RCC Embolization	Dr. Horvath
04/11/12	VIR Journal Club	VIR Staff
04/12/12	VIR Tumor Board	Multidisciplinary Cancer Team
04/16/12	Board Review	Dr. Horvath
04/18/12	VIR QA and Peer Review	VIR Staff

04/19/12	VIR Tumor Board	Multidisciplinary Cancer Team
04/20/12	Multidisciplinary Endovascular M&M	Multidisciplinary Endovascular Team
04/23/12	TBA	Dr. Horvath
04/26/12	VIR Tumor Board	Multidisciplinary Cancer Team

May/2012

05/01/12	Vascular Intervention/Central Venous Access	Dr. Garcia
05/03/12	VIR Tumor Board	Multidisciplinary Cancer Team
05/04/12	Vascular US: Case Review	Multidisciplinary Vascular US Team
05/07/12	VIR Board Review	Dr. Horvath
05/09/12	VIR Journal Club	VIR Staff
05/10/12	VIR Tumor Board	Multidisciplinary Cancer Team
05/14/12	VIR TBA	Dr. Horvath
05/16/12	VIR QA and Peer Review	VIR Staff
05/17/12	VIR Tumor Board	Multidisciplinary Cancer Team
05/18/12	Multidisciplinary Endovascular M&M	Multidisciplinary Endovascular Team
05/21/12	Board Review	Dr. Horvath
05/23/12	Vascular Intervention/Hemodialysis Interventions	Dr. Kimbiris
05/24/12	VIR Tumor Board	Multidisciplinary Cancer Team
05/28/12	VIR TBA	Dr. Horvath
05/31/12	VIR Tumor Board	Multidisciplinary Cancer Team

June/2012

06/01/12	Vascular US: Case Review	Multidisciplinary Vascular US Team
06/05/12	Vascular Intervention/IVC Filter Placement/ Pulmonary Thromboembolic Disease	Dr. Leung
06/07/12	VIR Tumor Board	Multidisciplinary Cancer Team
06/11/12	VIR Irreversible Electroporation	Dr. Horvath
06/13/12	VIR Journal Club	VIR Staff
06/14/12	VIR Tumor Board	Multidisciplinary Cancer Team
06/15/12	Multidisciplinary Endovascular M&M	Multidisciplinary Endovascular Team
06/20/12	VIR QA and Peer Review	VIR Staff
06/21/12	VIR Tumor Board	Multidisciplinary Cancer Team
06/25/12	VIR TBA	Dr. Horvath
06/28/12	VIR Tumor Board	Multidisciplinary Cancer Team

VIR Fellowship Conference Schedule
Academic Year 2011-2012

Wednesday, July 6 – Orientation	Dr. Leung
Wednesday, July 13 – Journal Club	VIR Attendings
Wednesday, July 20 – VIR Peer Review	VIR Attendings
Wednesday, July 27 – Radiation Safety and Occupational Hazards	Dr. Leung
Wednesday, August 3 – Faculty Meeting	VIR Attendings
Wednesday, August 10 – Journal Club	VIR Attendings
Wednesday, August 17 – VIR Peer Review	VIR Attendings
Wednesday, August 24 – Venous Access	Dr. Horvath
Wednesday, August 31 – Trauma Interventions	Dr. Leung
Wednesday, September 7 – Venous Lysis	Dr. Garcia
Wednesday, September 14 – Journal Club	VIR Attendings
Wednesday, September 21 – VIR Peer Review	VIR Attendings
Wednesday, September 28 – IVC Filters	Dr. Horvath
Wednesday, October 5 – Faculty Meeting	VIR Attendings
Wednesday, October 12 – Journal Club	VIR Attendings
Wednesday, October 19 – VIR Peer Review	VIR Attendings
Wednesday, October 26 – PAD Part 1	Dr. Leung
Wednesday, November 2 – Biliary Interventions	Dr. Kimbiris
Wednesday, November 9 – Journal Club	VIR Attendings
Wednesday, November 16 – VIR Peer Review	VIR Attendings
Wednesday, November 23 – Management of Hepatic Malignancies	Dr. Garcia
Wednesday, November 30 – Mesenteric Angiography/Intervention	Dr. Leung
Wednesday, December 6 – Office Meeting	VIR Attendings
Wednesday, December 14 – Journal Club	VIR Attendings
Wednesday, January 3 – Renal Angiography/Intervention	Dr. Garcia
Wednesday, January 11 – Journal Club	VIR Attendings
Wednesday, January 18 – VIR Peer-review	VIR Attendings
Wednesday, January 25 – TIPS	Dr. Kimbiris
Wednesday, February 1 – Faculty Meeting	IR Attendings
Wednesday, February 8 – Journal Club	VIR Attendings
Wednesday, February 15 – VIR Peer Rewiew	VIR Attendings
Wednesday, February 22 – Aortic Endografting	Dr. Garcia
Wednesday, February 29 – PAD Part 2	Dr. Leung
Wednesday, March 7 – Office Meeting	VIR Attendings

Wednesday, March 14 – Journal Club	VIR Attendings
Wednesday, March 21 – VIR Peer Review	VIR Attendings
Wednesday, March 28 – SIR (no conference)	
Wednesday, April 4 – GU Interventions	Dr. Kimbiris
Wednesday, April 11 – Journal Club	VIR Attendings
Wednesday, April 18 – VIR Peer Review	VIR Attendings
Wednesday, April 25 – Tumor Ablation	Dr. Horvath
Wednesday, May 2 – Faculty Meeting	VIR Attendings
Wednesday, May 9 – Journal Club	VIR Attendings
Wednesday, May 16 – VIR Peer Review	VIR Attendings
Wednesday, May 23 – CTA/MRA	Dr. Gakhal ?
Wednesday, May 30 – Fellow Talk #1	Dr. Agriantonis
Wednesday, June 6 – Fellow Talk # 2	Dr. Goodman
Wednesday, June 13 – Journal Club	IR Attendings
Wednesday, June 20 – VIR Peer Review	IR Attendings
Wednesday, June 27 – Graduation Interview	Dr. Leung

Fellowship Statistical Seminars 2011-2012
All Lectures at 12:00 Noon, Room HVIS 2867

Wednesday, Oct 19, 2011	Introduction to Statistics and Research Design	Paul Kolm, PhD
Wednesday, Nov 16, 2011	Data Management and IRB Submissions	Claudine Jurkovitz, MD MPH
Wednesday, Dec 14, 2011	Regression—Linear and Logistic	Paul Kolm, PhD
Wednesday, Feb 7, 2012	Survival Analysis	Zugui Zhang, PhD
Wednesday, Mar 7, 2012	Power and sample size calculation	Paul Kolm, PhD
Wednesday, Mar 28, 2012	Screening & Diagnostic Accuracy	Paul Kolm, PhD
Wednesday, Apr 18, 2012	Economic Analysis	Kolm; Zhang