

## CURRICULUM VITAE

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### PERSONAL INFORMATION:

Name: Ronnie G. Smalling, MD, FACC, FSCAI  
Business Name: IN VEIN, SMALLING VASCULAR INSTITUTE  
Business Phone: (913) 912-3624  
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Business Address: 11025 Metcalf Avenue  
Overland Park, Kansas 66210  
E-mail: [REDACTED]  
Cell Phone: [REDACTED]  
Date of Birth: February [REDACTED] 1959  
Place of Birth: [REDACTED] Oregon  
Citizenship: United States of America  
Gender: Male

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### LICENSURE:

Kansas Medical License, 2008, [REDACTED]  
Missouri Medical License, 1993, [REDACTED]  
Arkansas Medical License, 1996, [REDACTED]  
Oklahoma Medical License, 1986, [REDACTED]  
California Medical License, 1988, [REDACTED] (Inactive)  
Oregon Medical License, 1992, [REDACTED] (Inactive)

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### BOARD CERTIFICATION:

Diplomate American Board of Internal Medicine,  
September 13, 1989; currently certified

Diplomate National Board of Physicians and Surgeons,  
Board Certified Diplomate of Internal Medicine,  
August 2015 – August 2017

Diplomate American Board of Internal Medicine  
Subspecialty Board of Cardiovascular Diseases  
November 1991; Recertified 2002  
MOC Participating Board Eligible

Diplomate National Board of Physicians and Surgeons  
Board Certified Diplomate of Cardiovascular Diseases  
August 2015 to August 2017

Diplomate	American Board of Internal Medicine Subspecialty Board Certification: Added Qualifications in Interventional Cardiology May 2001; MOC Participating Board Eligible
Diplomate	National Board of Physicians and Surgeons Board Certified Diplomate of Interventional Cardiology August 2015 to August 2017

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**EDUCATION:**

Degree	Medical Doctor, 1986 University of Oklahoma, College of Medicine Oklahoma City, OK
Degree	Bachelor of Science in Biomedical Chemistry, 1981 Oral Roberts University Tulsa, OK
Diploma	Broken Bow Senior High School, 1977 Broken Bow, OK

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**MEDICAL TRAINING:**

July 1, 1992 - June 30, 1993 Interventional Cardiology Fellowship Heart Institute at St. Vincent Hospital, Portland, OR
July 1, 1989 - June 30, 1992 Cardiovascular Fellowship Clinical Instructor in Medicine University of Southern California Medical Center, Los Angeles, CA
July 1987 - June 1989 Resident, Internal Medicine University of Oklahoma Affiliated Hospitals, Oklahoma City, OK
July 1986 - June 1987 Intern, Internal Medicine University of Oklahoma Affiliated Hospitals, Oklahoma City, OK

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**HONORS:**

- Top Docs of 2003**, Selected by peers as one of the best physicians in Cardiovascular Disease, 417 Magazine
- Chief Administrative Fellow**, Division of Cardiology, Los Angeles County and University of Southern California Medical Center, 1991 – 1992

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**MEMBERSHIPS:**

American College of Cardiology

American Medical Association

Kansas State Medical Association

Fellowship of the Society for Cardiovascular Angiography and Interventions (SCAI) Member since 2005

Missouri Chapter of the American College of Cardiology-District 4 Councilor April 2002 to October 2002

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**POSITIONS:****Nov '15 – Present****IN VEIN – Smalling Vascular Institute****Founder/Owner**

**Diagnostic Treatment** – Superficial Venous Disease –  
Varicose Veins; Non-invasive Screening for PAD and Venous Disease

**Intervention Treatment** – Superficial Venous Disease

- Endovenous Ultrasound Guided Radiofrequency Thermal Ablation
  - Chronic Superficial Venous Insufficiency; Varicose Veins
  - Sclerotherapy and Laser spider/reticular veins
  - Phlebectomy

**Sep '14 – Nov '15****Coronary & Peripheral Vascular Interventional Cardiologist**

Via Christi Heart & Pulmonary Clinic,  
2711 South Rouse Road – Suite C/D, Pittsburg, KS 66762  
Coronary - 128

Angiograms – 60

Interventions – 68

Peripheral - 318

Angiograms – 108

Interventions – 210

**2007 – 2014****Coronary & Peripheral Vascular Interventional Cardiologist**

Mercy Joplin Heartcare, 3020 St. Johns Blvd – Suite A, Joplin, Missouri 64804

Coronary

Angiograms – 20/month

Interventions – 10/month

Peripheral

Angiograms – 12/month

Interventions – 7/month

**2002 – 2004**      **Medical Director**  
Hammons Heart Institute, Springfield, Missouri

**1993 – 2007**      **Coronary and Interventional Cardiologist**  
St. John’s Regional Health Center, Springfield, MO

**CAREER CARDIAC & PERIPHERAL VASCULAR EXPERIENCE 1993-2015:**

HOSPITAL	DIAGNOSTIC CATHS	CARDIAC INTERVENTIONS	PERIPHERAL CATHS	PERIPHERAL INTERVENTIONS	
ST JOHN’S/MERCY SPRGFIELD, MO 7/1993 – 11/2007  8/2000 – 11/2007	6,500	5,500	PRE-PROTOCOL  500	PRE-PROTOCOL  575	13,075
ST JOHN’S JOPLIN, MO 11/2007 – 5/2014* *2011 TORNADO – HOSPITAL TOTAL LOSS	700	350	300	196	1,556
VIA CHRISTI PITTSBURG, KS 9/2014 – 10/2015 *SIX-MONTH ACTUALS	60*	68*	120*	215*	498
<b>TOTAL CAD&amp;PAD PROCEDURES 1993 – 2015</b>	<b>7,260</b>	<b>5,918</b>	<b>920</b>	<b>986</b>	<b>15,084</b>

**DETAILS:**

- **CARDIAC INTERVENTION** - Balloon, stent, or atherectomy (using laser or cutting devices) to coronary arteries
- **PERIPHERAL INTERVENTIONS** - Balloon, stent, atherectomy (using laser or cutting devices) to legs, arms, and/or kidneys

\* **NOTE: AVERAGE CARDIOLOGIST ANNUAL PROCEDURES = CARDIAC 30-50; PERIPHERAL 25-50**

**COMMITTEES:**

- St. John’s Vascular Center of Excellence Project Physician Co-Chair for the Education/Marketing Subcommittee, 2003
- St. John’s Cardiovascular Service Line Executive Committee, July 1, 2000 to 2004
- St. John’s Physicians and Clinics, Women’s Health Services Committee, January 2002 to Present
- St. John’s Physicians and Clinics, P&T Committee, 1998 to present
- St. John’s Physicians and Clinics, Compensation Committee, 2000
- Boston Scientific Corporation, Rotational Atherectomy Division Physician Advisory Panel Member, 2000
- St. John’s Physicians and Clinics Restructuring Oversight Committee Operations and Management - Physician Co-Chair March - July 1999

St John's Clinic Cardiovascular Research Committee July 2003 to Present  
St John's Clinic Umbrella Committee for Women's Health 2004

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## **AREAS OF CLINICAL EXPERTISE AND PRACTICE**

- I. Coronary Interventions
  - Diagnostic Cardiac Catheterization
  - Balloon Angioplasty
  - Coronary Stenting
    - Native Bypass Graft
    - Bypass Graft
- II. Percutaneous Peripheral Interventions
  - Diagnostic
  - Interventional
    - PTA, Peripheral and Renal Stents, Plaque Excision, Excimer Laser
- III. Superficial Venous Disease Diagnosis and Treatment
  - Diagnose Vascular Disease: non-diagnostic testing of arterial and venous of the lower extremities.
  - Comprehensive treatment of superficial vein disease
  - Endovenous ablation therapy for superficial venous disease using Ultrasound Guided treatment for abnormal and or diseased superficial venous disease
  - Sclerotherapy / Laser Aesthetics for Superficial spider/reticular
- IV. Consultation

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## **CURRENT CLINICAL PRACTICE**

Chronic Superficial Venous Disease diagnosis and treatment is my primary and sole clinical practice. Diagnosing Vascular disease like PAD and PVD is the focus with emphasis on treating Chronic Venous Insufficiency with Thermal Ablation by Radiofrequency catheter ablation; and some select laser ablation EVLT (Endovascular Laser Therapy) for symptomatic Venous Disease from Dysfunctional Venous Valvular disease to treatment of visible venous abnormalities like venous ulcers of the legs; additionally, treating spider and reticular veins of the skin aesthetically. New Non Thermal Ablation therapies will be incorporated into my practice in the near future.

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## **HISTORICAL CLINICAL PRACTICE**

Interventional cardiology was the primary focus of my 23-year clinical practice, performing 300 to 400 coronary interventions, and 300 to 400 diagnostic coronary angiograms.

The first 23 years of my clinical cardiovascular career was focused on a traditional hospital based practice with nearly all-vascular procedures radio logically guided. In addition to a highly successful career in the interventional cardiac arterial disease treatment and peripheral arterial disease diagnosis and

treatment, I participated in numerous research trials and cardiovascular device development. I was in private clinical practice in large and medium sized interventional cardiology groups. Some of the medical device developments resulted in cardiovascular disease peer-review journals and some became commercially successful products still used in the clinical Endovascular treatment of patients around the world.

In the area of peripheral interventions performing percutaneous transluminal angioplasty, peripheral and renal stenting, plaque excision, as well as Excimer laser procedures.

Research and development in emerging technologies related to vascular access management, peripheral and coronary interventions

Further details and discussions about interventional practice are available upon request.

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## PRESENTATIONS:

1. **Smalling RG.** "Current Indications for Renal Artery Stenting: Are There Any and Will They Make a Difference?" New Cardiovascular Horizons (NCVH) 2014 May, New Orleans, LA
2. **Smalling RG.** "A Review of Thienopyridine Antiplatelet Agents" Cardiovascular Update for Primary Care Provider – Session I. New Cardiovascular Horizons (NCVH) 2012 Jun, New Orleans, LA
3. **Smalling RG.** "Strategies for Managing CV Patients in a Natural Disaster" Cardiovascular Update for Primary Care Provider – Session II. New Cardiovascular Horizons (NCVH) 2012 Jun, New Orleans, LA
4. **Smalling RG.** "Evaluation and Therapy of Acute Chest Pain" Cardiovascular Update for Primary Care Provider – Session II. New Cardiovascular Horizons (NCVH) 2012 Jun, New Orleans, LA
5. **Smalling RG.** "Evaluation and Therapy of Acute Chest Pain" New Cardiovascular Horizons (NCVH) 2011 Jun, New Orleans, LA
6. **Smalling RG.** "Evaluation and Therapy of Acute Chest Pain" New Cardiovascular Horizons (NCVH) 2010 Jun, New Orleans, LA
7. **Smalling RG.** "Coronary Calcium Scoring - Who Should Have It?" New Cardiovascular Horizons (NCVH) 2010 Jun, New Orleans, LA
8. **Smalling RG.** "Emerging Technologies Vascular Closure" New Cardiovascular Horizons (NCVH) 2009 Jul, New Orleans, LA
9. **Smalling RG.** "Avoiding Vascular Access Complications: How to 'BEST' Remove Access Catastrophes from your Cath Lab" New Cardiovascular Horizons (NCVH) 2008 Sep, New Orleans, LA
10. **Smalling RG.** "Vascular Access Management: Strategies to Preserve the 'Precious CFA Real Estate'" New Cardiovascular Horizons (NCVH) 2007 September, New Orleans, LA.

**PRESENTATIONS:** (continued)

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11. **Smalling RG.** “Results of the Boomerang II Trial: A multicenter, controlled, randomized comparison of Boomerang Access Management System to manual compression showing significantly accelerated time to ambulation and discharge without active fixation.” EuroPCR Conference, 2007 May, Barcelona, Spain.
12. **Smalling RG.** “New Techniques in the Treatment of Peripheral Interventions in the Endovascular Suite.” St. Louis, Missouri Regional Interventional Cardiology Conference. 2007 April. St. Louis, MO.
13. **Smalling RG.** “Preliminary Data Results from Boomerang II Trial.” International Congress XX (ISES) 2007 February. Scottsdale, AZ
14. **Smalling RG, Allie DE, Goswami N.** “Contemporary Solution to Access Management New Platform – New Paradigm.” International Symposium of Endovascular Therapy (ISET), 2007 January; Hollywood, FL.
15. Weinstock BS, **Smalling RG, Allie DE.** “Targeted Renal Therapy (TRT) in the Prevention and Treatment of Contrast-Induced Nephropathy (CIN) and Renal Insufficiency.” New Cardiovascular Horizons (NCVH) 2006 November, New Orleans, LA.
16. **Smalling RG.** “Accelerated vascular access management using the new novel Boomerang percutaneous femoral access management system without active mechanical arterial site fixation: Initial Experience”. International Symposium of Endovascular Therapy (ISET), 2006 January; Miami Beach, FL.
17. **Smalling RG,** St John’s Annual Women’s Program, Chateau on the Lake, Branson, Missouri. November 2002 and 2003.
18. **Smalling RG,** “Congestive Heart Failure: Understanding the Continuum of Care for Optimal Management.” Presented at St. John’s Regional Health Center, *Disease Management Winter Symposium.* Springfield, MO. January 2003.
19. **Smalling RG,** “New NCEP-ATP3 Guidelines.” Presented at St. John’s Regional Health Center, *Grand Rounds.* Springfield, MO, October 2001.
20. Meurer MF, **Smalling RG,** Tjoa HI. “What’s New: Interventional Therapies?” *Thirteenth Cardiopulmonary Nursing Symposium.* Springfield, MO, April 13, 2001.
21. Marwah O, Posley K, Tak T, **Smalling RG,** Youssef M, Kawanishi DT, Chandraratna PAN. “Detection of Impaired Coronary Flow Reserve in Patients with Angiographically Successful Angioplasty of the Left Anterior Descending Artery by Transesophageal Echocardiography.” *Annual Meeting of the American Heart Association (AHA),* New Orleans, LA, November 16-19, 1992.

**PRESENTATIONS:** (continued)

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22. **Smalling RG**, Albornoz M, Tak T, Agarwal C, Tubau JF, Chandraratna PAN. "Role of Transesophageal Echocardiography in Evaluating Pericardial Disease." Submitted for presentation. *Annual Meeting of the American Heart Association (AHA)*. New Orleans, LA, November 16-19, 1992.
23. Kawanishi DT, Stellar W, **Smalling R**, Marchand AE, Morrison E, Rahimtoola SH. "Sustained Long-Term Benefits of Catheter Balloon Commissurotomy for Mitral Stenosis: Response to Exercise." *XIV Annual InterAmerican Congress of Cardiology (IACC) Scientific Sessions*. Orlando, FL, May 23-27, 1992.
24. **Smalling R**, Kawanishi DT, Stellar W, Morrison E, Rahimtoola SH. "Small Stature Increases Risk of Fatal Complications During Double-Balloon Commissurotomy for Mitral Stenosis." *XIV Annual InterAmerican Congress of Cardiology (IACC) Scientific Sessions*. Orlando, FL. May 23-27, 1992.
25. Kawanishi DT, Stellar W, **Smalling R**, Marchand AE, Morrison E, Rahimtoola SH. "Sustained Long-Term Benefits of Catheter Balloon Commissurotomy for Mitral Stenosis: Response to Exercise." *Western Regional Meeting, American Federation for Clinical Research*. Carmel, CA, February 1992.
26. **Smalling R**, Voyles WF, Thadani U, Teague SM. "Effects of Beta Blockade, Beta Stimulation, and Afterload on Doppler Ejection Dynamics." *Annual Meeting of the Oklahoma Association of Housestaff Physicians*. May 19, 1989.
27. **Smalling R**, Voyles WR, Teague SM, Anderson JL, Thadani U. "Mitral Annular Calcification: An Age Stratified Case-Control Study." *Annual Meeting of the American College of Physicians, Oklahoma Chapter*. October 20-22, 1988.
28. **Smalling R**, Voyles WF, Teague SM. "A Comparison of Left Ventricular Systolic Ejection Indices During Alterations of Contractility and Loading Conditions." *Annual Meeting of the Oklahoma Association of House Staff Physicians*. May 25, 1987.
29. **Smalling R**, Anderson JL, Voyles WF, Teague SM, Thadani, U. "Mitral Annular Calcification: Prevalence and Associated Clinical Features." *Annual Meeting of the American College of Physicians, Oklahoma Chapter*. October 23-25, 1986.

**PANELS:**

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Venous Disease Session: Making the Diagnosis of DVT. Panelist: **R Smalling, MD**. New Cardiovascular Horizons (NCVH) 2010 June, New Orleans, LA.

Cardiovascular General Session: The SFA and Popliteal Intervention. Chair: K Misumi, MD Panel: R Foster, MD; T Davis, MD; **R Smalling, MD**; A Ebner, MD. New Cardiovascular Horizons (NCVH) 2009 July, New Orleans, LA.



**PANELS:** (continued)

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Live Case – CTA Imaging Performed By: C Walker, MD; P Fail, MD; S Stagg, III, MD & Colleagues

Panel II: M Wholey, MD; B Weinstock, MD; R Beasley, MD; F Bunch, MD; E Kassab, MD; P Krishnan, MD; I Feuerstein, MD; M Khan, MD; Y Moosa, MD; M Wholey, MD; **R Smalling, MD** & C Peña, MD New Cardiovascular Horizons (NCVH) 2008 September, New Orleans, LA.

Live Case - Limb Salvage I Performed By: Craig Walker, MD; Peter Fail, MD; Samuel Stagg, III, MD & Colleagues

Panel I: R Beasley, MD; A Schmidt, MD; R Gammon, MD; J Ruiz-Aburto, MD; R Gallino, MD; E Dippel, MD; F Bunch, MD; **R Smalling, MD**; T Das, MD; N Choksi, MD & G Biamino, MD

New Cardiovascular Horizons (NCVH) 2008 September, New Orleans, LA.

Live Case – Critical Limb Ischemia Performed By: Craig Walker, MD & Colleagues

Panel II: A Schmidt, MD; R Dave, MD; R Gallino, MD; P Krishnan, MD; E Kassab, MD; E Dippel, MD; B Weinstock, MD; M Khan, MD; F Bunch, MD; R Beasley, MD; **R Smalling, MD**; B Reddy, MD

New Cardiovascular Horizons (NCVH) 2008 September, New Orleans, LA.

Live Case - Limb Salvage I Performed By: C Walker, MD; P Fail, MD; S Stagg, III, MD

Panel I: R Beasley, MD; D Scheinert, MD; R Gammon, MD; J Ruiz-Aburto, MD; R Gallino, MD; E Dippel, MD; D Dulas, MD; **RG Smalling, MD**; T Das, MD & S Mehta, MD New Cardiovascular Horizons (NCVH) 2007 September, New Orleans, LA.

Live Case Part II performed by Walker CM, Fail P, Stagg III S.

Panel II Discussants: Heuser R, Khan M, Gallino R, Weinstock BS, **Smalling RG**, Dippel E, Razavi M, Fogarty T. New Cardiovascular Horizons (NCVH) 2006 November 5.

Critical Limb Ischemia (CLI) – Live Case Limb Salvage II performed by Walker CM, Fail P, Stagg III S.

Panel II Discussants: Ramaiah VG, Gammon RS, Serino F, Garcia L, Runyon JP, Neville R, **Smalling RG**, Veerina K, Choksi N, McNamara T. New Cardiovascular Horizons (NCVH) 2006 November 4.

**PUBLICATIONS:**

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**BOOK CHAPTERS**

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Voyles WF, **Smalling R**, "Effects of Beta Blockade, Beta Stimulation and Afterload Upon Doppler Ejection Dynamics." Stress Doppler Echocardiography. Editor: Teague, SM. Martinus Nijhoff Publishers, 1989.

## ARTICLES

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1. Allie DE, **Smalling RG**, Hebert CJ, Walker CM. "Novel Vascular Access Management: The Boomerang system facilitates manual compression while leaving nothing behind." *Endovascular Today*. 2006 Apr; 5(4):52-58.
2. Block PC, **Smalling RG**, Owings RM. "Percutaneous Double Balloon Valvotomy for Bioprosthetic Tricuspid Stenosis." *Catheterization and Cardiovascular Diagnosis*. 1994 33:342-344.
3. Hutchison SS, **Smalling RG**, Albornoz M, Colletti P, Tak T, Chandraratna PAN, "Comparison of Transthoracic and Transesophageal Echocardiography in Clinically Overt or Suspected Pericardial Heart Disease." *The American Journal of Cardiology*. 1994 Nov 1;74(9):962-965.
4. Hutchinson SJ, **Smalling RG**, Ma A, Tubau JF, Kawanishi DT, Tak T, Rahimtoola SH, Chandraratna PA. "Transthoracic and transesophageal echocardiography pre and post percutaneous mitral catheter balloon valvulotomy." *J Heart Valve Dis*. 1994 Mar 3(2):149-54.
5. Goswami NJ, **Smalling RG**, Sinha S, Gammon RS, Ramaiah VG. "Comparison of the Boomerang™ Wire vascular access management system versus manual compression alone during percutaneous diagnostic and interventional cardiovascular procedures: The Boomerang™ Wire Vascular Access Management Trial II" *Catheterization and Cardiovascular Interventions*. 2016 87(1): 75-81

## PEER REVIEW

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1. Voyles WF, **Smalling RG**, Teague SM, Anderson JL, Johsen G, Thadani U. "Mitral Annular Calcification: An Age Stratified Case-Control Study." Submitted to *Archives of Internal Medicine*.
2. **Smalling RG**, Kawanishi DT, Chandraratna PAN, Rahimtoola SH "Small Left Ventricular Size and Length Are the Cause of Left Ventricular Perforation and Death During Double-Balloon Catheter Mitral Commissurotomy." Submitted for publication.
3. **Smalling RG**, Riggio D, Widerhorn J. "Pregnancy and AICD: Case Report of A Successfully Completed Pregnancy in A Female Patient with An Implantable Cardioverter Defibrillator." Submitted for publication.
4. **Smalling RG**, Albornoz M, Tak T, Tubau JF, Colletti P, Rahimtoola SH, Chandraratna PAN "Transesophageal Echocardiographic Evaluation of Pericardial Disease: Uses and Limitations of TEE Compared to Other Imaging Modalities." Submitted for publication.
5. **Smalling RG**, Agarwal C, Gupta R, Tak T, Tubau JF, Rahimtoola SH, Chandraratna PAN "Cardiac Masses: Transthoracic and

Transesophageal Echocardiographic Comparative Study: Uses and Limitations of Technique/Technology.” Submitted for publication.

## ABSTRACTS

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1. **Smalling RG.** Results of the Boomerang II Trial: A multicenter, controlled, randomized comparison of Boomerang Access Management System to manual compression showing significantly accelerated time to ambulation and discharge without active fixation. Accepted for presentation at EuroPCR Conference, Barcelona, Spain. 2007 May.
2. **Smalling RG,** Accelerated Vascular Access management Without Active Mechanical Site, Accepted for presentation at the Annual International Symposium on Endovascular Interventional (ISET), Miami Beach, FL. 2006 January.
3. **Smalling RG,** Albornoz M, Tak T, Agarwal C, Tubau JF, Chandraratna PAN “Role of Transesophageal Echocardiography in Evaluating Pericardial Disease.” *Circulation* 1992; 86(S1):I-726.
4. Marwah O, Poseley K, Tak T, **Smalling RG,** Youssef M, Kawanishi DT, Chandraratna PAN “Detection of Impaired Coronary Flow Reserve in Patients with Angiographically Successful Angioplasty of the Left Anterior Descending Artery by Transesophageal Echocardiography.” *Circulation* 1992; 86(S 1): I-724.

## ABSTRACTS SUBMITTED:

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1. **Smalling RG,** “A Novel New Vascular Access Management Paradigm – Boomerang Wire System: Initial Experience”. Submitted for presentation at the Annual Scientific Meeting of the Society of Interventional Radiology (SIR), Toronto, CAN, 2006 Mar.
2. **Smalling R,** Kawanishi DT, Stellar W, Morrison E, Rahimtoola SH “Small Stature Increases Risk of Fatal Complications During Double-Balloon Catheter Commissurotomy for Mitral Stenosis.” Submitted for presentation at the XIV Annual InterAmerican Congress of Cardiology (IACC) Meeting, Orlando, FL, May 1992.
3. **Smalling R,** Agarwal C, Tak T, Tubau JF, Chandraratna PAN. “Comparison of Transesophageal and Transthoracic Echocardiography Findings in Rheumatic Mitral Valve Disease.” Submitted for presentation at the Annual Meeting of the American Heart Association, Anaheim, CA, November 1991.
4. **Smalling R,** Kawanishi DT, Stellar W, Morrison E, Rahimtoola SH. “Small Stature Increases Risk of Fatal Complications During Double-Balloon Catheter Commissurotomy for Mitral Stenosis.” Submitted for presentation at the Annual Meeting of the American Heart Association (AHA), Anaheim, CA, November 1991.
5. **Smalling R,** Tak T, Tubau JF, Agarwal C, Chandraratna PAN. “Uses and Limitations of Transesophageal Echocardiography in the Evaluation of

Cardiac Masses.” Submitted for presentation at the Annual Meeting of the American Heart Association (AHA), Anaheim, CA, November 1991.

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**CLINICAL RESEARCH:**

“**WINNER** Registry; Cutting Balloon Device Utilization Trial. Principal Investigator: **Ron Smalling, MD**. 2002- 2003.

**RESEARCH EXPERIENCE:**

**INTERVENTIONAL CARDIOLOGY FELLOWSHIP: (1992-1993)**

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1. “Intracoronary Fluosol During Direct PTCA for the Treatment of Acute Myocardial Infarction.” Principal Investigators: Peter C. Block, MD and Henry B. Garrison, MD.
2. “Excimer Laser Coronary Angioplasty Device with Saline Perfusion.” Principal Investigators: Peter C. Block, MD and Kenton Gregory, MD.
3. “Intracoronary Flow Support Device for the Treatment of Acute Coronary Artery Dissection Complicating Balloon Angioplasty.” Principal Investigators: Henry B. Garrison, MD and Peter C. Block, MD.
4. Kawanishi DT, Stellar W, **Smalling R**, Marchand A, Morrison E, Rahimtoola SH. “Early and Late Effect on Exercise Hemodynamics of Catheter Balloon Commissurotomy for Mitral Stenosis.” Submitted for presentation at the Annual Meeting of the American Heart Association (AHA), Anaheim, CA, November 1991.
5. **Smalling RG**, Albornoz M, Tak T, Agarwal C, Tubau JF, Chandraratna PAN. “Role of Transesophageal Echocardiography in Evaluating Pericardial Disease.” Submitted for presentation at the Annual Meeting of the American Heart Association, New Orleans, LA, November 1992.
6. **Smalling RG**, Albornoz M, Tubau JF, Kawanishi DT, Tak T, Rahimtoola SH, Chandraratna PAN. “Transesophageal and Transthoracic Echo in Patients Undergoing Mitral Valve Balloon Commissurotomy.” Submitted for presentation at the Annual Meeting of the American Heart Association (AHA), New Orleans, LA, November 1992.
7. Marwah O, Posley K, Tak T, **Smalling RG**, Youssef M, Kawanishi DT, Chandraratna PAN. “Detection of Impaired Coronary Flow Reserve in Patients with Angiographically Successful Angioplasty of the Left Anterior Descending Artery by Transesophageal Echocardiography.” Submitted for presentation at the Annual Meeting of the American Heart Association (AHA), New Orleans, LA, November 1992.
8. **Smalling RG**, Kawanishi DT, Chandraratna PAN, Rahimtoola SH. “Small Left Ventricular Length and Volume are Associated with Left Ventricular Perforation and Death in Double-Balloon Catheter Mitral Commissurotomy.” Submitted for presentation at the Annual Meeting of the American Heart Association (AHA), New Orleans, LA, November 1992.

### **GENERAL CARDIOLOGY FELLOWSHIP: (1989-1992)**

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1. "Mitral Catheter Balloon Commissurotomy (Valvuloplasty): Evaluation of Different Balloon Catheters Used for Mitral Valvuloplasty in the Treatment of Patients with Rheumatic Mitral Stenosis." Principal Investigator: David T. Kawanishi, MD.
2. "Evaluation of Pericardial Disease Using Transesophageal Echocardiography: Comparing the Uses and Limitations of Transesophageal Echocardiography Compared to Transthoracic Echocardiography and Other Noninvasive Imaging Methods."

### **INTERNAL MEDICINE RESIDENCY: (1986-1989)**

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1. "Doppler Indices for Assessing Early Ventricular Ejection." Veteran Administration Research Grant, May 1986. Principal Investigator: Wyatt Voyles, MD. Role was to develop and refine the experimental protocol in the canine model, induce pharmacologic manipulations during data acquisition, and assist with data analysis.
2. "Coronary Vasodilator Reserve - Studies Using Doppler Catheters." American Heart Association, funded November 1986. Principal investigator: Wyatt Voyles, MD. Role in this research included development of the animal model; assist during the experimental protocol, and data acquisition and analysis.

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### **PATENTS**

**Number US8100937:** *Pressure assist system for facilitating vascular hemostasis and associated method.* Inventor: Ron Smalling, Springfield, MO. Issued: Jan 24, 2012.