

**IN THE STATE COURT OF FULTON COUNTY  
STATE OF GEORGIA**

<b>CHRISTINE D. PERRON,</b>	)	
	)	
<b>Plaintiff,</b>	)	
	)	<b>CIVIL ACTION</b>
<b>vs.</b>	)	
	)	<b>FILE NO. _____</b>
<b>BRYAN S. RUSSELL, D.P.M.,</b>	)	
<b>VILLAGE PODIATRY GROUP, L.L.C.,</b>	)	
<b>and JOHN/JANE DOE(S) 1-3,</b>	)	
	)	
<b>Defendants.</b>	)	

**PLAINTIFF'S COMPLAINT FOR DAMAGES**

COMES NOW, CHRISTINE D. PERRON, Plaintiff in the above-styled action, and hereby files this Complaint for Damages against the above-named Defendants, and shows this Honorable Court the following:

**PARTIES, JURISDICTION, AND VENUE**

1.

This is an action based upon allegations of professional negligence, arising out of the medical care and treatment rendered to Christine D. Perron by Dr. Bryan S. Russell of Village Podiatry Centers on or about November 9, 2015 at WellStar Paulding Hospital.

2.

Defendant Bryan Russell, D.P.M. is a Georgia citizen who is subject to the jurisdiction and venue of this Court. Defendant Russell may be served with process at his residence address, 25 Finch Forest Trail, Atlanta, Fulton County, GA 30327.

3.

Defendant Village Podiatry Group, L.L.C. ("Village Podiatry") is a Georgia limited liability company whose principal office is located at 900 Circle 75 Parkway, Suite 900, Atlanta,

Cobb County, GA 30339. Once served, Defendant Village Podiatry is subject to the jurisdiction and venue of this Court. Unless service is acknowledged, Defendant Village Podiatry may be served with process through its registered agent, Mitchell P. Hilsen, D.P.M., at 900 Circle 75 Parkway, Suite 900, Atlanta, Cobb County, GA 30339.

4.

Defendants John/Jane Doe(s) 1-3 are those yet unidentified individuals and/or entities who may be liable, in whole or part, for the damages alleged herein. Once served with process, John/Jane Doe(s) 1-3 are subject to the jurisdiction and venue of this Court.

5.

This court has subject matter jurisdiction, and venue is proper as to all Defendants in Fulton County.

### **FACTUAL BACKGROUND**

6.

On November 9, 2015, Dr. Russell of Village Podiatry Centers performed an open reduction internal fixation of a Weber B spiral oblique left distal fibular fracture on Ms. Perron at WellStar Paulding Hospital.

7.

Ms. Perron was examined by Dr. Russell for her first post-operative follow up examination on November 18, 2015. She complained of pain in the foot, ankle and calf, as well as nausea, dizziness, light-headedness, and shortness of breath. Dr. Russell's physical exam revealed pain to the distal lateral ankle with fibula, mild pain to the lateral ankle, ecchymosis, and edema. Dr. Russell referred her to Vascular Surgical Associates for a lower extremity venous duplex, which was negative, ruling out any deep vein thrombosis. Dr. Russell recommended that

she continue to ambulate, non-weight bearing.

8.

On December 8, 2015, Ms. Perron had her third post-operative treatment with Dr. Russell for complaints of deep peroneal and lateral dorsal cutaneous nerve irritation. Dr. Russell's physical exam again revealed pain to the distal lateral ankle with fibula, mild pain to the lateral ankle, ecchymosis, and edema. Dr. Russell recommended that Ms. Perron remain non-weight bearing on her left ankle, placed her in a cam walker boot, and prescribed physical therapy.

9.

On January 7 and January 28, 2016, Ms. Perron had follow up appointments with Dr. Russell for complaints of hypersensitivity and mottling to the ankle and she continued to walk on crutches with an antalgic gait. Dr. Russell's physical exam noted pain and hypersensitivity to the distal lateral ankle, moderate pain to the distal ankle with decreased range of motion, and edema. He diagnosed Ms. Perron with reflex sympathetic dystrophy ("RSD") (a/k/a complex regional pain syndrome "CRPS") and referred her to physical therapy for further evaluation of RSD and help with desensitization.

10.

On February 4, 2016, Ms. Perron was examined by Dr. Russell for a complaint that she felt her ankle pop when she got up that morning. A physical exam revealed pain and hypersensitivity to the distal lateral ankle, moderate pain to the distal ankle with improved range of motion, and pain to the peroneal tendons with appearance of scar tissue release behind the tendons. Dr. Russell's diagnosis was RSD. He ordered a CT scan of the left lower extremity and continued physical therapy to desensitize the left ankle.

11.

On February 9, 2016, Ms. Perron returned to Dr. Russell's office at Village Podiatry for her CT scan results. The CT scan showed intervals of healing of the fibula and no hardware failure. Dr. Russell's physical examination revealed pain and hypersensitivity to the distal lateral ankle, moderate pain to the distal ankle, pain to the peroneal tendons with appearance of scar tissue release behind the tendons, swelling to the distal sinus tarsi, and hypersensitivity to the lateral dorsal cutaneous nerve. The diagnosis remained RSD. Since there was improved sensation in Ms. Perron's toes, Dr. Russell recommended more physical therapy to improve the RSD and hypersensitivity to the lateral dorsal cutaneous nerve. He also advised Ms. Perron that he could remove the hardware from her lower leg and implant her nerve in the fibula.

12.

On February 17, 2016, Ms. Perron was examined by Dr. Erroll Bailey of Resurgens Orthopaedics for a history of stabbing, burning, numbness, and tingling in her left lower extremity since the open reduction internal fixation surgery performed by Dr. Russell for the left distal fibula fracture. Her physical examination revealed tenderness over the fibula plate, irritation of the superficial peroneal nerve, and numbness in the left foot along the distribution of the superficial peroneal nerve. Dr. Bailey diagnosed a superficial peroneal nerve injury.

13.

On May 23, 2016, Dr. Erroll Bailey's physical examination of Ms. Perron noted excruciating pain at the most proximal aspect of the fibular incision with numbness and tingling in her foot with palpation. His diagnosis was superficial peroneal nerve injury, caused by either a traction injury or a cut peroneal nerve at the proximal end of the incision. Immediate relief of pain was noted after injecting Ms. Perron's lower leg with Depo-Medrol, lidocaine, and

Marcaine. Dr. Bailey recommended surgical exploration of the superficial peroneal nerve if the pain returned.

14.

On July 28, 2016, Dr. Bailey performed surgery on Ms. Perron and removed the painful left fibular hardware, excised a neuroma of the superficial peroneal nerve, and buried the superficial peroneal nerve into the fibular bone. Dr. Bailey confirmed that the superficial peroneal nerve had been severed by Dr. Russell during the prior surgery to repair Ms. Perron's left distal fibular fracture.

**COUNT I- NEGLIGENCE OF BRYAN S. RUSSELL, D.P.M.**

15.

Plaintiff incorporates by reference, as if fully set forth herein, Paragraphs 1-14 of this Complaint for Damages.

16.

By agreeing to act as Ms. Perron's physician, Dr. Russell entered into a physician-patient relationship with her. Dr. Russell owed Ms. Perron a duty to exercise reasonable care and skill, namely that degree of care and skill that other medical doctors similarly situated would have provided ("the standard of care") in connection with his care and treatment of Ms. Perron.

17.

Dr. Russell breached his duty to exercise reasonable care and skill, and failed to comply with the applicable standard of care in his treatment of Ms. Perron.

18.

As a direct and proximate result of the negligence of Dr. Russell, Ms. Perron suffered bodily injury. As such, Ms. Perron is entitled to recover from Dr. Russell for all damages

suffered, including physical, emotional, and economic damages, both past and future.

19.

Plaintiff incorporates by reference, as if fully set forth herein, the Affidavit of B. Sonny Bal, M.D. attached as Exhibit 1 to Plaintiff's Complaint for Damages.

**COUNT II- VICARIOUS LIABILITY/RESPONDEAT SUPERIOR  
OF VILLAGE PODIATRY GROUP, L.L.C.**

20.

Plaintiff incorporates by reference, as if fully set forth herein, Paragraphs 1-19 of this Complaint for Damages.

21.

At all times relevant to the allegations contained in this Complaint, Dr. Russell was acting in the course and scope of his employment with Defendant Village Podiatry Group, L.L.C. and therefore, Village Podiatry Group, L.L.C. is vicariously liable for the respective acts of negligence as alleged herein.

22.

Plaintiff Christine D. Perron is entitled to recover from Village Podiatry Group, L.L.C. for all damages Plaintiff suffered as a proximate result of the negligence of its defendant employee, including physical, emotional, and economic injuries.

**COUNT III- VICARIOUS LIABILITY OF  
OF VILLAGE PODIATRY GROUP, L.L.C./AGENCY**

23.

Plaintiff incorporates by reference, as if fully set forth herein, Paragraphs 1-22 of this Complaint for Damages.

24.

At all times relevant to the allegations contained in this Complaint, Dr. Russell was acting in the course and scope of his authority as agent of his principal, Defendant Village Podiatry Group, L.L.C. in providing medical care to Plaintiff Christine D. Perron and therefore, Village Podiatry Group, L.L.C. is vicariously liable for the respective acts of negligence as alleged herein.

25.

Plaintiff Christine D. Perron is entitled to recover from Village Podiatry Group, L.L.C. for all damages Plaintiff suffered as a proximate result of the negligence of its defendant agent, including physical, emotional, and economic injuries.

**DAMAGES**

26.

Plaintiff incorporates by reference, as if fully set forth herein, Paragraphs 1-25 of this Complaint for Damages.

27.

As a direct and proximate result of the Defendants' individual and collective conduct, Plaintiff Christine D. Perron is entitled to recover from Defendants reasonable compensatory damages in an amount in excess of \$10,000.00 to be determined by a fair and impartial jury for all damages Plaintiff suffered, including physical, emotional, and economic injuries.

WHEREFORE, Plaintiff demands a trial by jury and judgment against the Defendants as follows:

- (a) That process issue and Defendants be served in accordance with law;

- (b) That Plaintiff have a trial by jury on each and every allegation in the Complaint for Damages;
- (c) That Plaintiff Christine D. Perron have judgment against Defendants for compensatory damages in an amount in excess of \$10,000.00 as determined by a fair and impartial jury;
- (d) All costs of this action; and
- (e) Such other and further relief as the Court deems just and proper.

Respectfully submitted,

*/s/ Lloyd N. Bell*

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LLOYD N. BELL  
Georgia Bar No. 048800  
MICHAEL K. WATSON  
Georgia Bar No. 741526

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Atlanta, GA 30361  
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mike@BellLawFirm.com

*Attorneys for Plaintiffs*



STATE OF MISSOURI

COUNTY OF BOONE

**AFFIDAVIT**

**PERSONALLY APPEARS** before the undersigned authority, duly authorized to administer oaths, comes B. Sonny Bal, M.D, who, after first being duly sworn, deposes and states as follows:

1.

I am B. SONNY BAL. I am a medical doctor currently licensed to practice medicine in the State of Missouri and have been continuously so licensed for approximately 28 years. That time period includes November 2015, which is the subject of my review and opinions, as well the five years prior to that period. I attended undergraduate school at the University of California- Davis where I received a Bachelor of Science and Master of Science in Genetics. I attended Medical School at Cornell University Medical College where I received my Medical Degree in 1987. I completed my Internship in General Surgery at University of California Hospitals and Clinics, in San Francisco, California from 1987 to 1989. I completed a Residency in Orthopaedic Surgery at University of Missouri School of Medicine, in Kansas City, Missouri from 1989 to 1993. I completed a fellowship in Hip and Implant Surgery at Massachusetts General Hospital / Harvard Medical School in Boston, Massachusetts from 1993 to 1994. I was a Research Assistant at the Orthopaedic Biomechanics Laboratory at Massachusetts General Hospital from 1994 to 1995. I am over the age of eighteen (18) years, suffer from no legal disabilities, and give this Affidavit based upon my own personal knowledge and belief. My Curriculum Vitae is attached hereto and incorporated herein as Exhibit "A."



2.

The subject of my review was the care and treatment of Christine Perron. Ms. Perron was at one time the patient of Bryan S. Russell, D.P.M. The medical records that are available for review reveal that on or about November 9, 2015, Dr. Russell performed an open reduction internal fixation of the left distal fibula fracture on Ms. Perron. For at least three of the five years preceding that date (and in fact, continuously for many years prior to that date), I was regularly engaged in the clinical practice of orthopedic spine surgery for adults like Ms. Perron.

Specifically, I was regularly engaged in

- the assessment and treatment of patients with a spiral oblique distal fibular fracture;
- the recommendation and performance of open reduction internal fixation surgery to address a Weber B spiral oblique distal fibular fracture, including that procedure performed on Ms. Perron by Dr. Russell;
- the post-operative monitoring, management and treatment of patients who have undergone open reduction internal fixation of a Weber B spiral oblique distal fibula fracture.

3.

Based upon my education, training and experience, I am familiar with that degree of care and skill ordinarily exercised by members of the medical profession generally under the same or similar circumstances and like surrounding conditions (the “standard of care”).

Specifically, I am familiar with that degree of care and skill required by podiatric surgeons and orthopedic surgeons rendering medical care to Christine Perron, as her condition is reflected in the medical records that I have reviewed. In addition, I have, during at least three of the last five years immediately preceding the time the act or omission is alleged to have occurred, supervised, taught, or instructed orthopaedic surgery residents, and have knowledge of the standard of care of orthopaedic surgery residents under the circumstances at issue

regarding the care and treatment of Christine Perron.

4.

In connection with giving this Affidavit, I have reviewed the following of Christine Perron's medical records:

1. Village Podiatry Centers- Bryan S. Russell, D.P.M.;
2. WellStar Paulding Hospital (11/09/2015);
3. Vascular Surgical Associates (11/18/2015);
4. Atlanta Allergy & Asthma;
5. WellStar Douglas Imaging (02//08/2016);
6. Resurgens Orthopaedics;
7. American Health Imaging (11/21/2016); and
8. Imaging studies performed at Tanner Medical Center, WellStar Paulding Hospital, Village Podiatry Centers, and Resurgens Orthopaedics.

5.

The medical records reveal that, on November 9, 2015, Dr. Russell of Village Podiatry Centers performed an open reduction internal fixation of a Weber B spiral oblique left distal fibular fracture on Ms. Perron at WellStar Paulding Hospital. Ms. Williams was placed in a Bobby Jones splint. She was discharged home non-weight bearing on the left lower extremity and was to follow up with Dr. Russell in approximately 14 days. See Operative Notes attached hereto as Exhibit "B."

6.

Ms. Perron was examined by Dr. Russell for her first post-operative follow up examination on November 18, 2015. She complained of pain in the foot, ankle and calf, as well

as nausea, dizziness, light-headedness, and shortness of breath. Dr. Russell's physical exam revealed pain to the distal lateral ankle with fibula, mild pain to the lateral ankle, ecchymosis, and edema. Dr. Russell referred her to Vascular Surgical Associates for a lower extremity venous duplex, which was negative, ruling out any deep vein thrombosis. Dr. Russell recommended that she continue to ambulate, non-weight bearing. See 11/18/2015 Progress Note attached hereto as Exhibit "C" and Lower Extremity Venous Duplex attached as Exhibit "D."

7.

On December 8, 2015, Ms. Perron had her third post-operative treatment with Dr. Russell for complaints of deep peroneal and lateral dorsal cutaneous nerve irritation. Dr. Russell's physical exam again revealed pain to the distal lateral ankle with fibula, mild pain to the lateral ankle, ecchymosis, and edema. Dr. Russell recommended that Ms. Perron remain non-weight bearing on her left ankle, placed her in a cam walker boot, and prescribed physical therapy in 2 weeks. See 12/8/2015 Progress Note attached hereto as Exhibit "E".

8.

On January 7 and January 28, 2016, Ms. Perron had follow up appointments with Dr. Russell for complaints of hypersensitivity and mottling to the ankle and she continued to walk on crutches with an antalgic gait. Dr. Russell's physical exam noted pain and hypersensitivity to the distal lateral ankle, moderate pain to the distal ankle with decreased range of motion, and edema. He diagnosed Ms. Perron with reflex sympathetic dystrophy ("RSD") and referred her to physical therapy for further evaluation of RSD and help with desensitization. See 1/7/2016 and 1/28/2016 Progress Notes attached hereto as Exhibit "F" and Exhibit "G," respectively.

9.

On February 4, 2016, Ms. Perron was examined by Dr. Russell for a complaint that she felt her ankle pop when she got up in the morning. A physical exam revealed pain and hypersensitivity to the distal lateral ankle, moderate pain to the distal ankle with improved range of motion, and pain to the peroneal tendons with appearance of scar tissue release behind the tendons. Dr. Russell's diagnosis was RSD. He ordered a CT scan of the left lower extremity and continued physical therapy to desensitize the left ankle. See 2/4/2016 Progress Note attached hereto as Exhibit "H."

10.

On February 9, 2016, Ms. Perron returned to Dr. Russell's office at Village Podiatry for her CT scan results. The CT scan showed intervals of healing of the fibula and no hardware failure. Dr. Russell's physical examination revealed pain and hypersensitivity to the distal lateral ankle, moderate pain to the distal ankle, pain to the peroneal tendons with appearance of scar tissue release behind the tendons, swelling to the distal sinus tarsi, and hypersensitivity to the lateral dorsal cutaneous nerve. The diagnosis remained RSD. Since there was improved sensation in Ms. Perron's toes, Dr. Russell recommended more physical therapy to improve the RSD and hypersensitivity to the lateral dorsal cutaneous nerve. He also advised Ms. Perron that he could remove the hardware from her lower leg and implant her nerve in the fibula. See Progress Note attached as Exhibit "I."

11.

On February 17, 2016, Ms. Perron was examined by Dr. Erroll Bailey of Resurgens Orthopaedics for a history of stabbing, burning, numbness, and tingling in her left lower extremity since the open reduction internal fixation surgery performed by Dr. Russell for her left

distal fibula fracture. Her physical examination revealed tenderness over the fibula plate, irritation of the superficial peroneal nerve, and numbness in the left foot along the distribution of the superficial peroneal nerve. Dr. Bailey diagnosed a superficial peroneal nerve injury. See 2/17/2016 Treatment Note attached as Exhibit "J."

12.

On May 23, 2016, Dr. Erroll Bailey's physical examination of Ms. Perron noted excruciating pain at the most proximal aspect of the fibular incision with numbness and tingling in her foot with palpation. His diagnosis was superficial peroneal nerve injury, caused by either a traction injury or cut peroneal nerve at the proximal end of the incision. Immediate relief of pain was noted after injecting Ms. Perron's lower leg with Depo-Medrol, lidocaine, and Marcaine. Dr. Bailey recommended surgical exploration of the superficial peroneal nerve if the pain returned. See 5/23/2016 Treatment Note attached hereto as Exhibit "K".

13.

On July 28, 2016, Dr. Bailey performed surgery on Ms. Perron and removed the painful left fibular hardware, excised a neuroma of the superficial peroneal nerve, and buried the superficial peroneal nerve into the fibular bone. Dr. Bailey confirmed that the superficial peroneal nerve had been severed by Dr. Russell during the prior surgery to repair Ms. Perron's left distal fibular fracture. See 7/28/2016 Operative Note attached as Exhibit "L" and 10/24/2016 Treatment Note attached as Exhibit "M," respectively.

14.

It is my opinion, based upon my education, training, experience and the facts contained in the medical records I have reviewed, the standard of care required Dr. Russell to identify and protect the superficial peroneal nerve while performing the open reduction internal fixation of

Ms. Williams left distal fibular fracture. According to the medical records I have reviewed, Dr. Russell failed to identify and protect the superficial peroneal nerve, and then served the superficial peroneal nerve during the open reduction internal fixation of the left distal fibular fracture, which is a breach of the standard of care. The breach of the standard of care, more likely than not, caused or contributed to Ms. Perron's injuries.

15.

For each of the opinions I express in this Affidavit, I hold those opinions to a reasonable degree of medical probability or certainty; that is, more likely than not.

16.

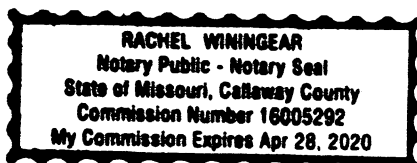
It is not the purpose of the Affidavit to set forth each and every criticism that I have now or may have in the future regarding the care and treatment rendered to Ms. Perron by Dr. Russell in the November 2015 time frame. It is my understanding that this Affidavit is being used to satisfy OCGA § 9-11-9.1, which requires that this Affidavit set forth one negligent act and the factual basis for my opinion.

**FURTHER AFFIANT SAYETH NOT**

  
\_\_\_\_\_  
B. Sonny Bar, M.D.

Sworn to and subscribed before me,  
this 6 day of October, 2017.

  
NOTARY PUBLIC



**B. SONNY BAL; MD, MBA, JD, Ph.D**

**CURRICULUM VITAE**

Professor (tenured)  
Department of Orthopaedic Surgery  
University of Missouri Health Care  
1100 Virginia Avenue  
Columbia, Missouri 65212

Phone: (573) 882-6762  
Fax: (573) 882-8200  
Email: BalB@health.missouri.edu

**EDUCATION: Fellowship and Residency**

**Fellowships:**

Research Assistant 8/1/1994 to 7/31/1995  
Orthopaedic Biomechanics Laboratory  
William H. Harris, M.D.  
Massachusetts General Hospital  
Boston, Massachusetts

Hip and Implant Surgery, Post-graduate year 7 8/1/1993 to 7/31/1994  
William H. Harris, M.D.  
Massachusetts General Hospital  
Harvard Medical School  
Boston, Massachusetts

**Internship & Residency:**

Orthopaedic Surgery, Post-graduate years 3-6 7/1/1989 to 6/30/1993  
Department of Orthopaedic Surgery  
University of Missouri School of Medicine  
Kansas City, Missouri

General Surgery, Post-graduate years 1-2 7/1/1987 to 6/30/1989  
Department of General Surgery  
University of California Hospitals and Clinics  
San Francisco, California

**EDUCATION:**

**Graduate School:**

Kyoto Institute of Technology (Ph.D -Engineering) 10/15/2014 to 9/26/2016  
Kyōto Kōgei Sen'i Daigaku, Kyoto, Japan

October 30, 2017





**Law:**

University of Missouri School of Law (JD) 8/27/2002 to 5/16/2009  
Columbia, Missouri

**Business Management:**

Kellogg Graduate School of Management (MBA) 09/1/1997 to 6/30/1999  
Northwestern University  
Evanston, IL

**Medical School:**

Cornell University Medical College (MD) 8/1/1983 to 5/27/1987  
New York, New York

**College:**

University of California (MS-Genetics) 7/1/1982 to 6/30/1983  
Davis, California

University of California (BS-Genetics) 3/1/1981 to 6/30/1982  
Davis, California

San Joaquin Delta College (AA-Biology) 1/16/1979 to 2/28/1981  
Stockton, California

**ACADEMIC APPOINTMENTS**

Professor 9/1/2013 to Present  
Department of Orthopaedic Surgery  
University of Missouri Health System-Columbia

Adjunct Faculty 8/2012 to Present  
Executive MBA Medicine Program  
University Malaysia

Interim Chairman 12/15/2008 to 8/30/2009  
Department of Orthopaedic Surgery  
University of Missouri Health System-Columbia

Chief of Adult Reconstruction 9/1/2007 to 8/31/2013  
Department of Orthopaedic Surgery  
University of Missouri Health System-Columbia

Associate Professor 9/1/2007 to 8/31/2013  
Department of Orthopaedic Surgery  
University of Missouri Health System-Columbia

Adjunct Professor  
Department of Materials Science and Engineering  
Missouri Science & Technology University -Rolla

Assistant Professor  
Department of Orthopaedic Surgery  
University of Missouri Health System-Columbia

9/1/1999 to 8/31/2007

Assistant in Orthopaedic Surgery  
Cambridge Hospital/Harvard Medical School  
Cambridge, Massachusetts

1993 to 1995

### **BOARD CERTIFICATION**

American Board of Orthopaedic Surgery, July 1997.  
American Board of Orthopaedic Surgery, recertified, July 2016.  
Missouri Bar Association, September 2009.  
Florida Expert Witness Certificate, March 2014.

### **PROFESSIONAL MEMBERSHIPS & APPOINTMENTS**

President & CEO; Amedica Corp. (NASDAQ: AMDA) September 30, 2014 to present.  
Chairman, Board of Directors, Amedica Corp. (NASDAQ: AMDA); August 21, 2014 to present.  
MU Department of Radiology Promotion and Tenure Committee; July 2014.  
Amedica Corporate Board of Directors (NASDAQ: AMDA); January 1 2013 to present.  
Amedica Corporate Audit Committee; January 1 2013 to present.  
Amedica Corporate Compensation Committee; January 1 2013 to present.  
Lifetime Member: International Soc. for Tech. in Arthroplasty; January 1, 2013 to present.  
Professional Liability and Compliance Committee; March 1, 2012-October 30, 2015.  
American Bar Association; 2009 to present.  
The Missouri Bar Association; 2009 to present.  
University of Missouri Graduate Faculty; 2009.  
University Physicians Professional Liability Committee; 2006 to 2008.  
Clinical Orthopaedic Society; 2005 to present.  
Jefferson Club, University of Missouri-Columbia; 2005 to present.  
The Library Society, University of Missouri-Columbia; 2005 to present.  
The McAlester Society, University of Missouri-Columbia; 2005 to present.  
McMaster University Evidence-Based Journal Reviewing System; 2003 to 2006.  
Missouri State Orthopaedic Association; 2003 to 2013.  
American Association of Hip and Knee Surgeons; 2001 to present.  
Mid-America Orthopaedic Association; 2000 to 2013.  
Orthopaedic Research Society; 2000 to present.  
Society for Biomaterials; 2000 to present.  
American Academy of Orthopaedic Surgeons.  
Shareholder/Partner, Jackson Country Orthopaedics, Inc., Blue Springs, MO; 1995 to 1999

**RELATED PROFESSIONAL EXPERIENCE:**

**1. LEGAL:**

- a. Founded BalBrenner Law Firm, North Carolina to promote scholarly work related to medicolegal education.
- b. 10-year history of writing the “Orthopaedic Medico-Legal Advisor” Column in *Orthopedics Today*, and industry newsletter
- c. Quarterly column titled “MedicoLegal Sidebar” published 4 times a year in *Clinical Orthopaedics and Related Research*
- d. Extensive experience with nationwide counsel in medical malpractice, product liability, and intellectual property litigation.

**2. CORPORATE:**

- a. Chairman of the Board, President, and CEO of AMEDICA (Nasdaq: AMDA)
- b. Restructuring, and new financing:
  - i. Dawson James Securities (Agent): Public offering of stock and warrants, \$13 million, December 2014.
  - ii. Ladenburg-Thalman (Agent): Registered Direct/Private Placement \$15 million in Common Stock and Warrants, September 2015
  - iii. Ladenburg-Thalman (Agent): Follow-on Offering, \$12.7 million in Common Stock & Warrants, and Convertible Preferred Stock & Warrants, July 2016
  - iv. Maxim Group New York (Agent): Follow on Offering in Common Stock and Warrants, \$4.5 million, January 2017

**HOSPITAL AFFILIATIONS**

University of Missouri Hospital and Clinics; 6/21/1999 to present. (Active)

Women’s and Children, known as Columbia Regional Hospital; 8/16/2000 to present. (Active)

Boone Hospital Center; 6/2000 to 2/13/2014. (Courtesy)

Capital Region Medical Center; 11/15/2005 to present. (Active)

Harry S. Truman Veterans’ Memorial Hospital; 12/12/1999 to present. (WOC)

St. Mary’s Hospital, Blue Springs, MO; 7/1995 to 8/1999.

Centerpoint Medical Center of Independence, Independence, MO; 1995 to 1999.

Cambridge Hospital, Cambridge, MA; 1994 to 1995.

**OUTPATIENT CENTER AFFILIATIONS**

The Institute for Outpatient Surgery; 7/1/2002 to present.

HealthSouth Rusk Rehabilitation Center; 6/8/2006 to present.

**HONORS AND AWARDS**

Visiting Professorship; University of Oklahoma Department of Orthopaedic Surgery, September 29, 2017

Neumann Visiting Professorship; University of Rochester, Center for Musculoskeletal Research, New York, August 1-2, 2017

Examiner, American Board of Orthopaedic Surgeons Part II: July 2009, 2011, 2012, 2017.

Missouri Hospitals Association Award for Exceptional Care, May 2017

Elite Reviewer for the Journal of Arthroplasty and 2014 “Wall of Fame”

AAOS Achievement Award, March 12, 2013.

Certificate of Editorial Achievement, Guest Editor for Composite Materials in Skeletal Engineering for Open Access Journal. December 2012.

AAOS Achievement Award for Volunteer Service. January 27, 2012.

Missouri Life Sciences Research Award. The Evaluation of a Synthetic Bioactive Biomaterial Scaffold for the Tissue Engineering of Cartilage. P Jayabalan, MN Rahaman, BS Bal, HJ Sims, JL Cook. July 18 – 21, 2011.

2nd Place Phi Zeta Research Day Poster Presentation, University of Missouri. July 18 – 21, 2011.

University of Missouri President's Intercampus Collaboration Award. March 4, 2011.

University of Missouri, Research and Creativities Forum 2010: 1<sup>st</sup> Place Award Bioactive Glass 13-93 as a subchondral substrate for tissue engineered osteochondral constructs *P Jayabalan, AR Tan, MN Rahaman, BS Bal, CT Hung, JL Cook.*

Appointed to Elwood L. Thomas Inn of Court, MU School of Law; 2008 to 2009.

American Board of Orthopaedic Surgeons: Invited examiner for oral examination of candidates taking Part II of ABOS Certification Examination, July 14-17, 2008, July 2017.

COL Making A Difference Award, 2008.

Paul "HAP" Award for Outstanding Scientific Paper, International Society of Technology in Arthroplasty (ISTA), August 2007.

American Academy of Orthopaedic Surgeons, Clinician-Scientist Travel Fellowship Award, December 2006.

American Academy of Orthopaedic Surgeons, Leadership Fellows Program, Class of 2007 (elected 2006).

University of Missouri Health Care Service Quality Award for July 2005.

Department of Radiology-Chair Search Committee, University of Missouri Health Care, 2001.

St. Luke's Hospital House Staff Research Award, University of Missouri School of Medicine 1991.

Rex L. Diveley Orthopaedic Research Award, University of Missouri–Kansas City School of Medicine 1990, 1992, and 1993.

Department of Orthopaedic Surgery Prize, University of Missouri - Kansas City School of Medicine 1990, 1991, 1992, and 1993.

Richard H. Kiene Orthopaedic Award, University of Missouri - Kansas City School of Medicine 1990, 1991, and 1992.

Honors in Research with M.D. degree, Cornell University Medical College 1987.

Dept. of Physiology Basic Science Research Prize, Cornell University Medical College 1987.

Teaching Assistantships, Genetics and Biochemistry, University of California-Davis 1982 to 1983.

Alpha Zeta Honor Society, University of California-Davis 1982.

B.S. degree with High Honors, University of California-Davis 1982.

A.A. degree with High Honors, San Joaquin Delta College 1981.

Teaching Assistantships, Chemistry and Physics, San Joaquin Delta College 1980 to 1981.

Alpha Gamma Sigma Honor Society, San Joaquin Delta College 1980.

### **STUDENT RESEARCH ADVISOR, SPONSOR, MENTOR**

“Design of a Cable Tensioning Tool For Reattachment of the Greater Trochanter.”

Undergraduate thesis, Mechanical & Aerospace Engineering, MU MAE 350 Honors Research,

December 2002, Jonathan T. Brown. Sherif El-Gizawy, PhD, Honors Advisor and **B. Sonny Bal, MD**, Research Advisor.

“Finite Element Analysis of Proximal Femoral Loading In Minimally Invasive Total Hip Replacement.” MS Thesis, October 2005, Aaron Xavier Molina Martell. Sherif El-Gizawy, PhD, Thesis Supervisor and **B. Sonny Bal, MD**, Thesis Co-Supervisor.

“Alternative Avenues for MedicoLegal Dispute Resolution.” Program mentor and graduate advisor, 2005-2006, Sukhsimranjit Singh, LLM degree, University of Missouri Law School.

“Fabrication of Functional Gradient Composite Ceramic Materials for Orthopaedic Bearings.” Hrishikesh Keshavan, 2002-2003. MS thesis, MU Aerospace and Mechanical Engineering. Graduate student advisors: Khaled Morsi, PhD, and **B. Sonny Bal, MD**.

“Response of primary human blood monocytes and the U937 human monocytic cell line to alumina ceramic particles.” Efrat Yagil, MS thesis, MU School of Veterinary Immunobiology. Graduate Advisors: D. Mark Estes, PhD, and **B. Sonny Bal, MD**.

“Tissue-engineered osteochondral constructs.” Post Graduate fellowship advisor: Dr. Wenhai Huang, PhD. January 1, 2005 to June 30, 2006. Mohamed Rahaman, PhD, and **B. Sonny Bal, MD**.

“Alumina/polyethylene acetabular cups and alumina-niobium bearings for total hip arthroplasty.” Post Graduate fellowship advisor: Yadong Li, PhD, April 1, 2005 to July 31, 2006. Co-Advisors: Mohamed Rahaman, PhD, and **B. Sonny Bal, MD**.

“Interaction of cells with bioactive glasses.” Undergraduate fellowship; Second Prize in the UM-Rolla annual undergraduate research competition, Agatha Dwilewicz, April 2006. Advisors: Mohamed Rahaman, PhD, and **B. Sonny Bal, MD**.

“Fabrication of hydroxyapatite and bioactive glass scaffolds for bone repair and regeneration.” Qiang Fu, PhD, August 2005. Advisor: Mohamed Rahaman, PhD, and **B. Sonny Bal, MD**.

“Composite Ceramic THA Bearings.” Post Graduate fellowship Dr. Aihua Yao, Visiting Scientist, July 15, 2006 to present. Advisors: Mohamed Rahaman, PhD, and **B. Sonny Bal, MD**.

“Nanomechanical Property Characterization of Femoral Heads.” Masters of Science thesis presented to the Faculty of the Graduate School, University of Missouri-Columbia, Prashanthi Tirunagari 2006. Sanjeev Khanna, PhD, Thesis Supervisor and **B. Sonny Bal, MD**, Research Advisor.

“Freeze casting of bioactive ceramics and glass scaffolds for engineering bone tissue.” PhD/DE Advisory and Thesis Defense Committee. Qiang Fu August 15, 2005 to May 28, 2009. Mohamed Rahaman, PhD, Faith Dogan, PhD, Roger Brown, PhD, Delbert Day, PhD and **B. Sonny Bal, MD**.

“Serum Amyloid Factor and Osteophyte Formation in Degenerative Joint Disease.” Srijita Dhar, student May 2008 to present. Master’s thesis committee.

Doctoral Dissertation and Advisory Committee member, PhD degree, Graduate Student Xin Liu, January 2010-August 2012, Missouri S&T University, Rolla, MO. Dissertation: Bioactive Glass Scaffolds for the Regeneration of Load-Bearing Bone.

“Bioactive Glass (13-93) as a subchondral substrate for tissue-engineered osteochondral constructs.” Prakash Jayabalan, Andrea Tan, Mohammed N Rahaman, **B Sonny Bal**, Hannah J Sims, Clark T Hung and James L Cook. Prakash won 2010 MU Post-Doctoral Association Travel Award Grant.

Faculty Mentor: MU Discovery Fellow Research Student (Darby Provance); 2011 to 2012.

“A New Standard for Measuring Professional Conduct of the Physician in Training.” *Publication in preparation* Faculty Advisor: Haden Ross Compton, 2<sup>nd</sup> year law student, University of Missouri-Columbia.

Advisor to Missouri Law Review Associate Member, fall 2011 academic semester, University of Missouri, Columbia.

Advisor to Clint Mathews. A class ran by Jake Holliday of the Missouri Innovation Center - Starting a High Growth Venture - The Business Plan.

Supported seven (7) post-graduate fellows at Comparative Orthopaedic Laboratory, 2003-2012.

PhD Advisory Committee; Wei Xiao. Bioactive glass scaffolds for structural bone repair. 2016

Pre-Clerkship Advisor to first year medical students and Clinical Advisor to students early in the M3 year.

Faculty Mentor: Student Research Fellowship (Mitchell Tarka); 2014-2015.

Committee Member for Yinan Lin for work on 13-93 bioactive glass doped with Cu in rat calvarial defect model and segmental model; 2014.

*Clinical Risk and Judicial Reasoning –How to Make Legally Sound Clinical Decisions.* Mentor: Caroline Poma, Class of 2017, University of North Carolina School of Law.

Faculty Mentor: Student Research Samuel Thompson and Dominic Zanaboni; A Comparison of Cost and Hospital Outcomes in Patients Receiving the ConforMIS iTotal TKA vs. an off the shelf brand; 2015.

Thesis advisory committee member for Yinan Lin: Healing of Bone Defects in a Rodent Calvarial Defect Model Using Strong Porous Bioactive Glass (13-93) Scaffolds; 2015.

ASC Preclerkship Advisor: Kenny Weith; August 2015-July 2016.

Mentor and Pre-clerkship Advisor: Medical Student John Welsh, University of Missouri 2017.

**COMMITTEE SERVICE**

**National/International:**

At-Large Legal Advisor for Health Policy Committee, American Association of Hip and Knee Surgeons, January 2010 to present.

Contributing Author to the Interactive Educational Program (IEP) for Total Joint, 2010 to present.

Orthopaedic Research & Education Foundation (OREF), Orthopaedic Partners Committee. Appointment, June 2010 to present.

Medical Liability Committee, American Academy of Orthopaedic Surgeons, March 2008 to March 2010.

Honorary One Health Initiative Website Advisory Board, July 2009 to present.

Hip, Knee, and Adult Reconstruction Evaluation Subcommittee, American Academy of Orthopaedic Surgeons, 2007 to March 2013.

American Academy of Orthopaedic Surgeons, Leadership Fellows Program, 2007 to 2008.

Legal Advisory Committee, American Association of Hip and Knee Surgeons, July 2005 to present; Vice-Chairman, November, 2005, Chairman elect 2007 to 2010.

American Legal Forum and Orthopaedic Medical Legal Advisor Bulletin, Founding Member, and Board of Directors, Chapel Hill, NC, 2005 to present.

Medical Liability Committee, American Academy of Orthopaedic Surgeons, Academic Business and Practice Management Committee, American Academy of Orthopaedic Surgeons, 2002 to 2005.

Foundation for the Advancement of Research in Medicine, Board of Directors, California, 2002 to present.

ECRI-Health Technology Forecast Advisory Board, 2003 to 2005.

Orthopaedic Research & Education Foundation (OREF), Finance Committee. Appointment, August 2012 to present.

American Bar Association Advisory Panel, appointed March 2012 to present.

Advisory Board for *Physicians' Life* magazine, November 2014 to present.

Orthopaedic Research & Education Foundation (OREF), Visionary Research Society, August 2014-present.

Orthopaedic Research & Education Foundation (OREF) Board of Trustees, February 29, 2016-February 29, 2019.

**Industry:**

Board of Directors, Amedica US Spine Inc., Salt Lake City, UT. Appointed January 2012.

Board of Directors, OrthoMind Inc. Social Media website for Orthopaedic Surgeons. Appointed August 2011.

Hip and Knee Implant Designer Surgeon Panel, Zimmer Inc., Warsaw, Indiana, 2002-2011.

Total Joint Reconstruction Clinical Advisory Panel, Amedica Inc., Salt Lake City, UT, 2005 to present.

Board of Directors, BoneSmart.org and FARMortho LLC.

Scientific Advisory Board for the ConforMIS iTotal Hip Implant, May 2013 to present.

**University of Missouri:**

MU Discovery Fellows Program for the 2011 to 2012 academic year.

MU Orthopaedic Transitional Leadership Advisory Committee, 2008 to 2009.

Member; Board of Directors and Executive Committee, Missouri Orthopaedic Institute, University of Missouri.

Promotion & Tenure Committee of the Department of Orthopaedic Surgery, University of Missouri, Columbia.

UP Malpractice Committee.

Service Line Chief, 9/1/2007 to 8/31/2013

**EDITORIAL BOARDS/PEER REVIEWER**

Peer reviewer for the Hip, Knee & Adult Reconstruction questions for the new Self-Assessment Examination based on the AAOS Orthopaedic Knowledge Online, April 27, 2012 to present.

Editorial Manager, Adult Reconstruction OKO Self-Assessment Exam: Adult Reconstruction, April 2011.

Editorial Board, *World Journal of Orthopedics* (WJO), March 2011 to present.

Peer reviewer, *Journal of Knee Surgery*, April 2010 to present.



Editorial Board member of *Orthopedics Today*, April 2010 to present.

Editorial Board of *Global Journal of Surgery*, February 2010 to June 30, 2012.

Dove Medical Press, Honorary Editorial Board, 2008 to present.

Editorial Board, *Journal of Orthopaedic Surgical Advances*, October 2007 to present.

Peer reviewer for *Journal of the American Academy of Orthopaedic Surgeons*.

Editorial Board for the *International Journal Medicine and Law*, January 1, 2014 to present.

Peer Reviewer, "Patient-Specific Rehabilitation in Knee Osteoarthritis"; PI – Stephen Sayers; University of Missouri Research Board Grant; May 2014.

Peer reviewer, *Arthroplasty Today*, October 2014 to present.

### **SCIENTIFIC PRESENTATIONS (peer reviewed)**

1. **Bal BS.** "Alpha-adrenergic blockade alters regional perfusion during E. coli bacteremia." First International Shock Congress and Tenth Annual Conference on Shock, Montreal, Canada, June 7-11, 1987.
2. **Bal BS.** "Concentration- and calcium- dependent binding of acidic phosphoproteins to type-I collagen." American Society for Bone and Mineral Research, San Diego, California, August 24-28, 1991.
3. **Bal BS.** "The oblique trochanteric osteotomy." 23rd Annual Hip Course, Harvard Medical School, Boston, Massachusetts, 1993.
4. **Bal BS.** "Factors in trochanteric union." 24th Annual Hip Course, Harvard Medical School, Boston, Massachusetts, 1994.
5. **Bal BS.** "Wear in monoblock versus modular femoral stems." 25th Annual Hip Course, Harvard Medical School, Boston, Massachusetts, 1995.
6. **Bal BS.** "Fate of trochanters in revision total hip arthroplasty." 25th Annual Hip Course, Harvard Medical School, Boston, Massachusetts, 1995.
7. **Bal BS.** "Trochanteric escape in revision total hip arthroplasty." 25th Annual Hip Course, Harvard Medical School, Boston, Massachusetts, 1995.
8. **Bal BS, Vandelune D, Gurba DM and Harris WH.** "A comparison of polyethylene wear between femoral stems of different modularity, porous-coating, and metal composition." Annual Meeting of the American Academy of Orthopaedic Surgeons, Atlanta, Georgia, February 22-26, 1995.

9. **Bal BS.** “Cementless cups into prior allografts.” 29th Annual Hip Course, Harvard Medical School, Boston, Massachusetts, 1999.
10. **Bal BS.** “Ceramic femoral components in total knee replacement.” Mid-Central States Orthopaedic Society/Missouri State Orthopaedic Association Annual Meeting, Branson, Missouri, June 2000.
11. **Bal BS.** “Ceramic femoral head fractures.” 4th Annual Symposium on Alternate Bearings in Total Joint Arthroplasty, Maui, Hawaii, September 24-26, 2001.
12. **Bal BS.** “Zirconia ceramic femoral component in total knee replacement.” 4th Annual Symposium on Alternative Bearings in Total Joint Arthroplasty, Maui, Hawaii, September 24-26, 2001.
13. Cook JL, Ray A, Ray BK, Kuroki K, Kenter K, **Bal BS.** “Transcription factor SAF-1 regulates matrix metalloproteinase-1 gene expression in osteoarthritis” Aust G. Orthop Res Soc, New Orleans, LA, February 2-5, 2003. *\*\*Orthopaedic Research Society’s 2003 New Investigator Recognition Award Winner\*\**
14. **Bal BS.** “Ceramic-on-ceramic bearings in total hip replacement.” 33<sup>rd</sup> Annual Course, Advances in Arthroplasty, Harvard Medical School, Cambridge, MA, September 17-20, 2003.
15. **Bal BS.** “Ceramic total knee replacement.” The 6<sup>th</sup> Annual Symposium on Alternative Bearing Surfaces in Total Joint Replacement, San Francisco, California, September 22-24, 2003.
16. **Bal BS.** “Characterization of surface damage to alumina bearings in total hip arthroplasty.” 17<sup>th</sup> Annual Symposium of the International Society for Technology in Arthroplasty, Rome, Italy, September 23-25, 2004.
17. **Bal BS.** “Ceramics dislocation.” 34<sup>th</sup> Annual Course, Advances in Arthroplasty, Harvard Medical School, Cambridge, MA, September 29-October 2, 2004.
18. **Bal BS.** “My first 50 cases.” 34<sup>th</sup> Annual Course, Advances in Arthroplasty, Harvard Medical School, Cambridge, MA, September 29-October 2, 2004.
19. **Bal BS.** “Encore ceramic-ceramic and status of PDP.” The 7<sup>th</sup> Annual Symposium on Alternative Bearing Surfaces in Total Joint Replacement, Philadelphia, PA, October 14-15, 2004.
20. **Bal BS.** “Ceramic total knee replacement.” The 7<sup>th</sup> Annual Symposium on Alternative Bearing Surfaces in Total Joint Replacement, Philadelphia, PA, October 14-15, 2004.
21. **Bal BS.** “MIS THR: not an easy road.” The 7<sup>th</sup> Annual Symposium on Alternative Bearing Surfaces in Total Joint Replacement, Philadelphia, PA, October 14-15, 2004.

22. **Bal BS.** “Early clinical results of primary hip replacement surgery using two incisions.” The 14<sup>th</sup> Annual American Association of Hip and Knee Surgeons, November 5-7, 2004, Dallas, Texas.
23. **Bal BS,** Haltom D, Aleto T, Barrett MO. “Clinical results in eighty-nine primary total hip replacements performed with a two-incision minimally invasive technique.” Minimally Invasive Surgery meets Computer Assisted Orthopaedic Surgical Technology (MIS meets CAOS) Indianapolis, IN, May 19-21, 2005.
24. **Bal BS,** Garino JP. “Ceramic-on-ceramic versus ceramic-on-polyethylene bearings in total hip arthroplasty: results of a multicenter prospective randomized study and update of modern ceramic total hip trials in the USA.” BioloX Symposium, Washington, DC, June 1-11, 2005.
25. **Bal BS.** “Surface changes to alumina femoral heads after metal staining during implantation, and after recurrent dislocations of the prosthetic hip.” BioloX Symposium, Washington, DC, June 1-11, 2005.
26. **Bal BS.** “Primary total knee replacement with a zirconia ceramic femoral component.” BioloX Symposium, Washington, DC, June 1-11, 2005.
27. **Bal BS.** “MIS sub-vastus approach to total knee replacement.” 35<sup>th</sup> Annual Course, Advances in Arthroplasty, Harvard Medical School, Cambridge, MA, September 28-October 1, 2005.
28. **Bal BS.** “Ceramics for the orthopaedic surgeon.” 35<sup>th</sup> Annual Course, Advances in Arthroplasty, Harvard Medical School, Cambridge, MA, September 28-October 1, 2005.
29. **Bal BS.** “High incidence of fractures of the polyethylene tibial post in a posterior cruciate-substituting total knee system.” The 15<sup>th</sup> Annual American Association of Hip and Knee Surgeons, Dallas, Texas November 4-6, 2005.
30. **Bal BS.** “A few concepts, regards, medical defense, action and liability reform.” An educational presentation by the AAHKS Legal Advisory Committee. The 15<sup>th</sup> Annual American Association of Hip and Knee Surgeons, Dallas, Texas, November 4-6, 2005.
31. **Bal BS,** Khandkar A. “Alternative bearing in total hip replacement.” The 50<sup>th</sup> Annual Conference of Indian Orthopaedic Association, Mumbai, India, December 28, 2005.
32. **Bal BS.** “Alternative bearing – ceramics.” The 50<sup>th</sup> Annual Conference of Indian Orthopaedic Association, Mumbai, India, December 28, 2005.
33. **Bal BS,** Greenberg DD, Li S, Cherry KL, Aleto TJ. “Failure of the polyethylene tibial post in a posterior cruciate-substituting total knee arthroplasty.” Annual Meeting of the American Academy of Orthopaedic Surgeons, Chicago, Ill., March 24, 2006.
34. **Bal BS,** Lowe J, Burlingame N, Serafin L. “Relationship between diameter and load to failure in ceramic femoral heads.” 23<sup>rd</sup> Annual Southern Orthopaedic Association Meeting, Paradise Island, Bahamas, July 20, 2006.

35. **Bal BS**, Lowe J, Burlingame N, Serafin L. “MIS sub-vastus approach to total knee replacement.” Twenty-third Annual Southern Orthopaedic Association Meeting, Paradise Island, Bahamas, July 20, 2006.
36. **Bal BS**, Barrett MO, Lowe J. “Early outcomes of primary total hip replacements with a modified two incision approach.” 23<sup>rd</sup> Annual Southern Orthopaedic Association Meeting, Paradise Island, Bahamas, July 20, 2006.
37. **Bal BS**. “Zimmer MIS 2-incision THA improvement—M/L taper hip.” Zimmer Arthroplasty Course, Nashville, Tennessee, November 10, 2006.
38. **Bal BS**. “Avoiding leg length discrepancy with *VerSys* hip/longevity poly.” Zimmer Arthroplasty Course, Nashville, Tennessee, November 10, 2006.
39. **Bal BS**, Ries M, Atwood S, Anderson M, Penenberg B, Halley D, Greenwald A, Pruitt L, Penenberg, B. “Fracture of highly cross-linked UHMWPE acetabular Liners.” Presented at the 75<sup>th</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, San Francisco, CA, March 5-9, 2008.
40. Khandkar AC, Bernero J, **Bal BS**, Lakshminarayanan R, Clarke I, Hoffman AA. “Silicon nitride: a new material for spinal implants.” 10<sup>th</sup> Annual Update in Hip and Knee Arthroplasty and Bearings Surfaces, held in Racho Mirage, CA, September 17-19, 2008.
41. Cook JL, Lima EG, Ng KW, Kuroki K, Stoker AM, **Bal BS**, Ateshian GA, Hung CT. “Towards biologic osteochondral resurfacing of the canine patella using tissue engineered anatomic constructs.” Orthopaedic Research Society, New Orleans, LA, March 6-9, 2009.
42. Lima EG, Chao PH, Ateshian GA, Cook JL, **Bal BS**, Vunjak-Novakovic G, Hung CT. “Porous tantalum metal outperforms devitalized bone as a substrate for osteochondral tissue engineering.” Orthopaedic Research Society, New Orleans, LA, March 6-9, 2009.
43. Tan AR, Barsi JM, Jayabalan PS, Rahaman MN, **Bal BS**, Ateshian GA, Cook JL, Hung, CT. “The potential for 13-93 bioglass as a medium supplement for culturing tissue engineered cartilage.” Orthopaedic Research Society, New Orleans, LA, March 6-9, 2009.
44. Jayabalan P, Tan AR, Rahaman MN, **Bal BS**, Sims HJ, Hung CT, Cook JL. “Bioactive glass (13-93) as a subchondral substrate for tissue-engineered osteochondral constructs.” Orthopaedic Research Society, New Orleans, March 6-9, 2009
45. Invited speaker: “2010 Anterior approach total hip arthroplasty” for the round table discussion tip and tricks Q&A and “Learning the anterior approach my experience with technique (from 2–incision to anterior approach)” in Las Vegas, NV, October 22, 2010.
46. “The anterior approach optimizes THA outcome” and “Ceramic-ceramic use in THA: comforts and caveats.” 12<sup>th</sup> Annual Current Concepts in Joint Replacement Las Vegas, NV May 22 – 25, 2011.

47. Accepted presentation for the 63<sup>rd</sup> Annual Meeting of The Association of Bone and Joint Surgeons in Dublin, Ireland, June 8-12, 2011.
48. Symposium: “Contemporary medico-legal issues in orthopaedic surgery” in San Francisco, CA, February 6 - 10, 2012.
49. “Medico-legal issues in arthroplasty surgery,” “Metal cones in TKR,” “Fundamentals of revision TKA basic principles – case presentations and rapid fire discussions,” “Bioactive glasses in skeletal reconstruction,” “Infected TKR - case presentations and rapid fire discussions.” 11th Anniversary of the Annual Advances in Arthritis, Arthroplasty and Trauma Course in St. Louis, MO, April 26-28, 2012.
50. “Current status of ceramic total hip bearings” and “Discussion panel: metal-on-metal total hips.” 2012 Annual Missouri State Orthopaedic Association Meeting May 18 – 19, 2012.
51. The 42nd Annual Advances in Arthroplasty Course, Harvard Medical School, Cambridge, MA, October 2–5, 2012.
52. 2013 Annual Meeting American Academy of Orthopaedic Surgeons, Instructional Course: “Contemporary medico-legal issues in orthopaedic surgery” in Chicago, IL, March 19-23, 2013.
53. 2013 Annual Meeting American Academy of Orthopaedic Surgeons, Symposium: “Medical-legal considerations in managing patients with musculoskeletal tumors” in Chicago, IL, March 19-23, 2013.
54. The Stevens Conference: The 2nd Conference on Bacteria – Material Interactions: “Silicon nitride – A unique antibacterial bioceramic” in Hoboken, NJ, June 6, 2013.
55. ISTA 26<sup>th</sup> Annual Congress: “Patient-specific implants and instruments improved outcomes of total knee replacement” in Palm Beach, Florida, October 18, 2013.
56. “A new generation of bioceramics: the case for silicon nitride.” 2015 2nd Annual Pan Pacific Orthopaedic Congress, Big Island of Hawaii, July 22-25, 2015.
57. McEntire BJ, **Bal BS**, Rahaman MN, Pezzotti G. “The effect of accelerated aging on the material properties of ceramic femoral heads.” ISTA 28<sup>th</sup> Annual Meeting, Vienna, Austria, September 30 - October 3, 2015.
58. Bock RM, McEntire BJ, **Bal BS**, Rahaman MN, Boffelli, M, Pezzotti G. “Surface modulation of silicon nitride ceramics for orthopaedic application.” ISTA 28<sup>th</sup> Annual Meeting, Vienna, Austria, September 30 - October 3, 2015.
59. Pezzotti G, Puppulin L, Boffelli M, McEntire BJ, Rahaman MN, Yamamoto K, **Bal BS**. “The effect of ceramic femoral head material composition on polyethylene structure and oxidation in total hip bearings.” ISTA 28<sup>th</sup> Annual Meeting, Vienna, Austria, September 30 - October 3, 2015.

60. **Bal BS**, McEntire BJ, Rahaman MN, Pezzotti G. “Debunking the myth that ceramics are bioinert: comparison of alumina versus silicon nitride.” ISTA 28<sup>th</sup> Annual Meeting, Vienna, Austria, September 30 - October 3, 2015
61. McEntire BJ, Enomoto Y, Zhu W, Boffelli M, Marin E, **Bal BS**, Pezzotti G. “Differential effects of hydrothermal ageing on the surface fracture toughness of ceramics.” 2016 Orthopaedic Research Society, Orlando, Florida, March 5-8, 2016.
62. McEntire BJ, Jones E, Ray D, Bock RM, **Bal BS**, Pezzotti G. “Differential bacterial expression on silicon nitride, PEEK, and titanium surfaces.” 2016 Orthopaedic Research Society, Orlando, Florida, March 5-8, 2016.

### **SCIENTIFIC PRESENTATIONS (not peer reviewed)**

1. **Bal BS**. “Dorsal Capsulodesis of the Scaphoid for Scapholunate Dissociation.” American Orthopaedic Association Residents’ Conference, Kansas City, Missouri, 1991.
2. **Bal BS**. “Experience with Ceramic Knee Femur.” Orthopedic Review Symposium, Vail Colorado, January 2002.
3. **Bal BS**. “Minimally Invasive Total Knee Technique & Results.” Contemporary Topics in Orthopedics, Vail Colorado, January 2-3, 2003.
4. **Bal BS**. “Minimally Invasive Total Hip Replacement.” Contemporary Topics in Orthopedics, Vail Colorado, January 2-3, 2003.
5. **Bal BS**. “Minimally Invasive Hip and Knee Replacement Surgery: Fact, Fiction, Reality and Myth. What the Patient Should Know.” Columbia, MO, March 12, 2005.
6. **Bal BS**. “Ceramic Bearings in Prosthetic Hip and Knee Joints.” University of Missouri-Rolla, Department of Materials Science and Engineering, December 1, 2005.
7. **Bal BS**. “Modified Two Incision Technique.” 20<sup>th</sup> Annual Vail Orthopaedic Symposium, Total Hip & Knee Arthroplasty, Vail, Colorado, January 22-27, 2006.
8. **Bal BS**, Rahaman MN. “Tissue-Engineering of Cartilage on Bioactive Glass Scaffolds.” 6<sup>th</sup> Annual Comparative Orthopaedics Day, Columbia, Missouri, April 14, 2006.
9. **Bal BS**, Aletto TJ. “Advances in Hip and Knee Replacement.” Columbia Activity Recreation Center, September 15, 2006.
10. **Bal BS**. “The Outcomes of Two-Incision Total Hip Arthroplasty Performed Without Intraoperative Fluoroscopy.” Minimally Invasive Surgery meets Computer Assisted Orthopaedic Surgical Technology (MIS meets CAOS) in Scottsdale, AZ, October 26-28, 2006.

11. **Bal BS**. “Subvastus Total Knee Arthroplasty Without Cement or Tourniquet.” Minimally Invasive Surgery meets Computer Assisted Orthopaedic Surgical Technology (MIS meets CAOS) in Scottsdale, AZ. MIS-CAOS, October 26-28, 2006.
12. **Bal BS**. “Acetabular Reaming and Positioning.” Anterior Approach Total Hip Arthroplasty, San Francisco, CA, March 1, 2013.
13. Tolia P, Marlow M, **Bal BS**, Phillips S. Panel Discussion: “How Can We More Quickly Bring New Materials-Based Infection-Control Strategies to Clinical Practice?” Matthew Libera, moderator. The Stevens Conference: The 2<sup>nd</sup> Conference on Bacteria – Material Interactions, Hoboken, NJ, June 6, 2013.
14. Panel Discussion: “Liability Exposure for New Orthopedic Technologies- All That Glitters May Not Be Gold!” 2014 Annual Meeting of Western Orthopaedic Association Scientific Program, The Fairmont Orchid, Big Island, HI, July 31-August 2, 2014.
15. Panel Discussion: “What a Difference a Year Makes.” Ted Davis, moderator. 12<sup>th</sup> Annual Musculoskeletal New Ventures Conference, Memphis, TN, October 28-29, 2014.
16. “Design and Rationale of a Constrained Acetabular Component.” MU Campus Fast Track 2015 Pitch Competition, April 13, 2015.
17. “Design and Rationale of a Constrained Acetabular Component.” MU Campus Fast Track 2015 Pitch Competition, May 8, 2015.
18. “Why iTotal,” “iTotal Cadaver Debrief” and “iTotal® Patient Indications & Selection.” National Surgeon Training: iTotal CR, iTotal PS, and iUni G2 Knee Replacement Systems, Plano, TX, January 9, 2016.
19. “Clinical application of the silicon nitride for arthroplasty” 46<sup>th</sup> Annual Meeting of the Japanese Society for Replacement Arthroplasty. Congress Convention Center, Osaka, Japan, February 26-27, 2016.

#### **ABSTRACTS/POSTERS (peer reviewed)**

1. **Bal BS**, Cherry K, Edelstein D. “Prospective Randomized Study Comparing Ceramic/Ceramic and Ceramic/PE Bearing Surfaces in Total Hip Arthroplasty.” The American Academy of Orthopaedic Surgeons 69<sup>th</sup> Annual Meeting in Dallas, Texas, February 2002.
2. Cook JL, Kuroki K, **Bal BS**. “Effects of Bipolar Radiofrequency Energy on Articular Cartilage Extracellular Matrix.” Orthop Res Soc in Dallas, TX, February 10-14, 2002.
3. Kazmier P, Burd T, **Bal BS**. “Nonunion of the Greater Trochanter Following the Anterior Trochanteric Slide Osteotomy.” The 35<sup>th</sup> Annual Residents Conference in Memphis, Tennessee, April 12-14, 2002.

4. Marberry KM, Cook JL, Kuroki K, Brawner T, Geiger T, Jayalaban P, Kenter K, **Bal BS**. “Effects of Radiofrequency Generated Heat on Human Degenerative Articular Cartilage.” American Orthopaedic Association - 35th Annual Residents Conference in Memphis, TN, April 13-15, 2002.
5. Kazmier P, Burd T, **Bal BS**. “Nonunion of the Greater Trochanter Following the Anterior Trochanteric Slide Osteotomy.” 12<sup>th</sup> Annual Meeting of the Mid-America Orthopaedic Association in Tucson, Arizona, April 24-28, 2002.
6. Marberry KM, Cook JL, Kuroki K, Kenter K, **Bal BS**. “In Vitro Assessment of Articular Cartilage Stiffness Following Treatment with Radiofrequency Generated Heat.” 20<sup>th</sup> Annual Mid-America Orthopaedic Association Meeting in Tucson, AZ, April 25-28, 2002.
7. Kazmier P, **Bal BS**, Patil SK, Rahaman MN. “Microscopic Characterization of Alumina Bearing Surfaces in Total Hip Arthroplasty.” The 49<sup>th</sup> Annual Meeting of the Orthopaedic Research Society in New Orleans, Louisiana, February 2-5, 2003.
8. Kazmier P, Gornowicz B, Crow B, Christensen G, **Bal BS**. “Bacterial Adhesion to Alumina Ceramic Versus Cobalt-Chrome Femoral Heads.” The 49<sup>th</sup> Annual Meeting of the Orthopaedic Research Society, New Orleans, Louisiana, February 2-5, 2003.
9. Kuroki K, Ray A, Aust G, Cook JL, **Bal BS**, Ray B. “SAF-1 Regulates Matrix Metalloproteinase-1 in Osteoarthritis.” Missouri Life Sciences Week in Columbia, MO, March 3-7, 2003.
10. Roller BL, Cook JL, **Bal BS**, Stoker AM. “Correlation of Clinical Assessment of Meniscal Pathology to Biochemical and Molecular Analyses.” University of Missouri Health Sciences Research Day in Columbia, MO, November 11, 2004.
11. Kumar D, Shakya A, Kuroki K, Cook JL, **Bal BS**, Ray A, Ray BK. “Induction of Matrix Metalloproteinases in Chondrocyte Cells of Osteoarthritic Cartilage is Mediated by Inflammation-Responsive Transcription Factors.” The American Society For Biochemistry and Molecular Biology Meeting, 2004.
12. Hendricks KJ, Aleto TJ, **Bal BS**. “Early results of Modern Ceramic on Ceramic Total Hip Arthroplasty, A Prospective Randomized Study.” 22<sup>nd</sup> Annual Mid-America Orthopaedic Association Meeting, 2004.
13. Roller BL, Cook JL, **Bal BS**, Stoker AM. “Correlation of Clinical Assessment of Meniscal Pathology to Biochemical and Molecular Analyses.” 3<sup>rd</sup> Biology of the Meniscus Meeting in Washington, DC, February 23, 2005.
14. **Bal BS**, Kazmier P, Burd T, Aleto TJ. “Anterior Trochanteric Slide Osteotomy for Primary Total Hip Replacement. Review of Nonunion and Complications.” American Academy of Orthopaedic Surgeons Annual Meeting in Washington, D.C. February 23-27, 2005.



15. **Bal BS**, Ray BK, Shakya A, Ray A. "Overexpression of MMP-14 in Human Osteoarthritic Joint Is Mediated by SAF-1." 52<sup>nd</sup> Annual Meeting of the Orthopaedic Research Society in Chicago, IL, March 19-22, 2006.
16. **Bal BS**, Evans R, Rahaman M, Ellingsen MD, Khanna, SK. "Comparison of Surface Characteristics and Prediction of Wear Properties between Alumina and Oxinium Femoral Heads." 52<sup>nd</sup> Annual Meeting of the Orthopaedic Research Society in Chicago, IL, March 19-22, 2006.
17. **Bal BS**, Rahaman M, Kuroki K, Cook JL. "In Vivo Comparison of Tissue Engineered Osteochondral Plugs Using Allograft Bone, Trabecular Metal and Bioactive Glass Substrates." Orthop Res Soc in San Diego, CA, February 11-14, 2007.
18. Roller BL, Stoker AM, Fox DB, **Bal BS**, Cook JL. "Characterization of Pathology of Knee Menisci: Correlation of Radiographic, Gross, Histologic, Biochemical and Molecular Measures of Disease." Orthop Res Soc in San Diego, CA, February 11-14, 2007.
19. **Bal BS**, Hillard A, Lowe J, Aleto TJ, Greenberg D. "Muscle Damage after Total Hip Arthroplasty with the Two-incision Technique." 24<sup>th</sup> Annual Mid-America Orthopaedic Association Meeting in Boca Raton, Florida, April 11-15, 2007.
20. **Bal BS**, Hughes M, Li S, Aleto TJ, Rahaman MN. "The Effect of Metal Staining on Alumina-Alumina Hip Simulation Wear." 24<sup>th</sup> Annual Mid-America Orthopaedic Association Meeting in Boca Raton, Florida, April 11-15, 2007.
21. **Bal BS**, Barrett MO, Greenberg DD, Lowe J, Aleto TJ. "Incidence of Heterotopic Ossification Following Primary Two-incision Total Hip Arthroplasty." 24<sup>th</sup> Annual Mid-America Orthopaedic Association Meeting in Boca Raton, Florida, April 11-15, 2007.
22. **Bal BS**, Aleto TJ, Lakshminarayanan RR, Khandkar A, Clarke I, Hoffman A. "The Wear of Silicon Nitride Ceramic Bearings in a Hip Simulator." 24<sup>th</sup> Annual Mid-America Orthopaedic Association Meeting in Boca Raton, Florida, April 11-15, 2007.
23. Rahaman MN, Li Y, Aleto TJ, **Bal BS**. "Alumina Ceramic Femoral Heads with a Metal Taper." 24<sup>th</sup> Annual Mid-America Orthopaedic Association Meeting in Boca Raton, Florida, April 11-15, 2007.
24. Cook JL, Lima EG, Ng KW, Kuroki K, Stoker AM, **Bal BS**, Ateshian GA, Hung CT. "Towards Biologic Osteochondral Resurfacing of the Canine Patella Using Tissue Engineered Anatomic Constructs." Orthop Res Soc in Las Vegas, NV, February 22-25, 2009.
25. Lima EG, Chao PH, Ateshian GA, Cook JL, **Bal BS**, Vunjak-Novakovic G, Hung CT. "Porous Tantalum Metal Outperforms Devitalized Bone as a Substrate for Osteochondral Tissue Engineering." Orthop Res Soc in Las Vegas, NV, February 22-25, 2009.
26. Tan AR, Barsi JM, Jayabalan P, Rahaman MN, **Bal BS**, Ateshian GA, Cook JL, Hung CT. "The Potential for 13-93 Bioglass as a Medium Supplement for Culturing Tissue Engineered

Cartilage.” 55<sup>th</sup> Annual Orthopaedic Research Society Conference in Las Vegas, NV, February 22 – 25, 2009.

27. Jayabalan P, Tan AR, Barsi JM, Rahaman MN, Ateshian GA, Hung CT, Cook JL, **Bal BS**. “In Vitro Optimization of Tissue Engineered Osteochondral Grafts.” 9<sup>th</sup> Annual Comparative Orthopaedics Day in Columbia, MO, April 2009
28. Jayabalan P, Tan AR, Barsi JM, Rahaman MN, **Bal BS**, Ateshian AG, Hung CT, Cook JL. ‘Bioactive Glass (13-93) as a Subchondral Substrate and Culture Media Supplement for Tissue Engineered Cartilage.’ International Cartilage Repair Society conference in Miami, Florida, May 2009.
29. Franklin SP, Hung C, Lima E, Ng K, Kuroki K, Stoker A, **Bal BS**, Ateshian G, Pfeiffer F, Cook JL. “Progression toward Biologic Joint Resurfacing in Dogs.” Veterinary Orthopedic Society Conference in Breckenridge, CO, February 20-27, 2010.
30. Roller BL, Stoker AM, Marberry KM, White RA, **Bal BS**, Cook JL. “Characterization of Meniscal Pathology with Molecular and Proteomic Analyses.” Orthop Res Soc in New Orleans, LA, March 6-9, 2010.
31. Roller BL, Stoker AM, Garner BC, **Bal BS**, Raghu DR, Cook JL. “Analysis of Synovial Fluid Biomarkers and Correlation with Radiography.” Orthop Res Soc in New Orleans, LA, March 6-9, 2010.
32. Jayabalan P, Tan AR, Rahaman MN, **Bal BS**, Sims HJ, Hung CT, Cook JL. “Bioactive Glass (13-93) as a Subchondral Substrate for Tissue-engineered Osteochondral Constructs.” Orthop Res Soc in New Orleans, LA, March 6-9, 2010.
33. **B.S. Bal**, Aleto TJ, Aggarwal A, Wegman B. “Primary Uncemented Total Knee Replacement with a Monoblock Tibial Component.” American Academy of Orthopaedic Surgeons Annual Meeting in San Diego, CA, February 15-19, 2011.
34. **Bal BS**. “Informed Consent Law: How Much to Disclose?” 64<sup>th</sup> Annual Meeting of the Association of Bone and Joint Surgeons in Charleston, South Carolina, May 2–6, 2012.
35. Pfeiffer FM, **Bal BS**. “P51; Fabrication and Evaluation of Tissue Engineered Femoral Head Implants for Resurfacing of Osteoarthritic Joints.” International Cartilage Repair Society conference in Montreal, Canada, May 12-15, 2012.
36. McEntire BJ, Lakshminarayanan A, **Bal BS**, Webster TJ. “An Overview of Silicon Nitride as a Novel Biomaterial.” 2012 Innovations in Biomaterials Conference, American Ceramic Society in Raleigh, NC, September 11-13, 2012.
37. Franklin S, Pfeiffer FM, Cockrell M, Stoker A, **Bal BS**, Cook JL. “Effects of low temperature hydrogen peroxide gas plasma sterilization on in vitro cytotoxicity of poly-l-caprolactone (PCL).”

38. Ivie C, **Bal BS**. “Concerns and Limitations of Ceramic Total Hip Bearings.” The Association of Bone and Joint Surgeons 65<sup>th</sup> Annual Meeting at Çırağan Palace Kempinski in Istanbul, Turkey, April 24-28, 2013.
39. Ivie C, Probst P, Bal A, Gallizzi M, Bal BS. “Patient-specific implants and instruments improved outcomes of total knee replacement.” The Clinical Orthopaedic Society’s 101st Annual Meeting in Niagara, NY, Sept. 19-21, 2013.
40. Rahaman MN, **Bal BS**, Huang T. “Porous titanium implants fabricated by a salt bath sintering process for bone repair applications.” Materials Science & Technology 2013, Next Generation Biomaterials; Montreal, Quebec Canada, October 27-31, 2013.
41. **Bal BS**, Ivie C, Davis M, Crist B. “Patient-specific implants and instruments improved outcomes of total knee replacement.” 2013;95B(34):86. Abstract published in Orthopaedic Proceedings, Dec. 31, 2013.
42. **Bal BS**, Liu X, Rahaman MN, Bi LX, Bonewald LF. “Strong porous bioactive glass implants for structural bone repair.” 60th Annual Meeting of the Orthopaedic Research Society at the Hyatt Regency New Orleans, March 15-18, 2014.
43. **Bal BS**. “Silicon nitride bearings for total joint arthroplasty.” 27th Annual Congress of the International Society for Technology in Arthroplasty (ISTA) to be held at the Hotel Okura in Kyoto Japan, September 24-27, 2014. *Lubricants*. 2016,4(4), 35.
44. **Bal BS**, McEntire BJ, Bock RM, Jones E, Rahaman M. “Surface modulation of silicon nitride ceramics for orthopaedic applications”. International Congress for Joint Reconstruction -- Transatlantic Orthopaedic Congress, in New York, NY, Oct. 3-5, 2014. Winner of a 2014 Transatlantic Orthopaedic Congress Abstract Award.
45. Tarka M, **Bal BS**. “End of arm robotic tool design for automated cutting assistance during total hip arthroplasty.” Health Sciences Research Day, University of Missouri School of Medicine, Columbia, MO, Nov. 16, 2014.
46. Cutler CS, Lattimer J, Kelsey J, Kuchuk M, O’Connor D, **Bal BS**, Katti KV. “Nano-radiosynovectomy for osteoarthritis treatment.” 2015 Society of Nuclear Medicine and Molecular Imaging Annual Meeting, Baltimore, Maryland, June 6-10, 2015.
47. Peterson BE, Buchert G, Probst P, Aleto TJ, **Bal BS**, Crist BD. “The use of fluoroscopy in aiding acetabular cup position in direct anterior total hip arthroplasty.” 2015 2nd Annual Pan Pacific Orthopaedic Congress, Big Island of Hawaii, July 22-25, 2015.
48. "Silicon nitride for orthopaedics – A bioactive and interactive non-oxide ceramic." 46th Annual Meeting of the Japanese Society for Replacement Arthroplasty, Osaka, Japan, February 26-27, 2016.
49. McEntire BJ, Zhu WL, Boffelli M, Marin E, Bal BS, Pezzotti G. “Effect of accelerated hydrothermal ageing on the surface fracture toughness of bioceramics.” 46th Annual Meeting of the Japanese Society for Replacement Arthroplasty, Osaka, Japan, February 26-27, 2016.

50. Werner N, Stoker AM, Bozynski C, **Bal BS**, Cook JL. "Responses of osteoarthritic osteochondral tissue to cytokine stimulation *in vitro*." 2016 Orthopaedic Research Society, Orlando, Florida, March 5-8, 2016.
51. Werner N, Stoker AM, Stannard J, **Bal BS**, Cook JL. "Assessment of biomarker production by osteochondral tissue obtained from patients undergoing total knee arthroplasty." 2016 Orthopaedic Research Society, Orlando, Florida, March 5-8, 2016.
52. Werner N, Stoker AM, Pfeiffer F, Stannard J, Bozynski C, **Bal BS**, Cook JL. "Correlation of biomarker production of biomechanical, biochemical, and histological properties of osteoarthritic osteochondral tissue obtained from patients undergoing total knee replacement." 2016 Orthopaedic Research Society, Orlando, Florida, March 5-8, 2016.
53. Pezzotti G, Puppulin L, Boffelli M, McEntire BJ, Rahaman MN, Yamamoto K, **Bal BS**. "Do ceramic femoral heads contribute to polyethylene oxidation." 2016 Orthopaedic Research Society, Orlando, Florida, March 5-8, 2016.
54. Pezzotti G, Puppulin L, Boffelli M, McEntire BJ, Sugano N, **Bal BS**. "Metal ions contribute to the material instability of zirconia toughened alumina." 2016 Orthopaedic Research Society, Orlando, Florida, March 5-8, 2016.
55. Peterson BE, Buchert G, Probst P, Aleto TJ, **Bal BS**, Crist BD. "The use of fluoroscopy in aiding acetabular cup position in direct anterior total hip arthroplasty." 47<sup>th</sup> Annual Meeting Missouri State Orthopaedic Association, Kansas City, MO, April 1-2, 2016.
56. McEntire BJ, Enomoto Y, Zhu W, Boffelli M, Marin E, Bal BS, Pezzotti G. "Comparative evaluation of the surface fracture toughness of bioceramics." 68th Annual Meeting of The Association of Bone and Joint Surgeons, Auckland, New Zealand, April 5-9, 2016.
57. Pezzotti G, Puppulin L, Boffelli M, McEntire BJ, Rahaman MN, Yamamoto K, **Bal BS**. "The effect of ceramic femoral head material composition on polyethylene structure and oxidation in total hip bearings." Innovations in Biomedical Materials and Technologies, Rosemont Hyatt in Chicago, IL, July 29-31, 2016.
58. "In situ Monitoring of Porphyromonas Gingivalis on Chemistry-Modulated Silicon Nitride Bioceramics." Innovations in Biomedical Materials and Technologies, Rosemont Hyatt in Chicago, IL, July 29-31, 2016.
59. "Enhanced Osteoconductivity on Surface-Modulated Silicon Nitride Bioceramics Monitored by in situ Raman Spectroscopy." Innovations in Biomedical Materials and Technologies, Rosemont Hyatt in Chicago, IL, July 29-31, 2016.
60. "Engineering Bacteriostatic Behavior into Implantable Medical Devices." Innovations in Biomedical Materials and Technologies, Rosemont Hyatt in Chicago, IL, July 29-31, 2016.
61. Pezzotti G, McEntire BJ, Bock R, Zhu W, Vitale E, Puppulin L, Adachi T, Yamamoto T, Kanamura N, **Bal BS**. "Enhanced Osteoblast Proliferation and Hydroxyapatite Formation on Silicon Nitride." The 28th Symposium and Annual Meeting of the International Society for Ceramics in Medicine, Charlotte, NC, Oct. 18-21, 2016.

62. Zhu W, Pezzotti G, McEntire BJ, Zanocco M, Marin E, Sugano N, **Bal BS**. "Transition Metal Ions Accelerate the Polymorphic Phase Transformation in Zirconia-Toughened Alumina." The 28th Symposium and Annual Meeting of the International Society for Ceramics in Medicine, Charlotte, NC, Oct. 18-21, 2016.
63. Bal BS, Bock R, Rondinella A, Marin E, Zhu W, Adachi T, McEntire BM, Pezzotti G. "Osteoinductive Properties of Silicon Nitride, Alumina, and Titanium." Orthopaedic Research Society 2017 Annual Meeting at the San Diego Convention Center in San Diego, California, March 19-22, 2017.
64. **Bal BS**, McEntire BM, Pezzotti G, Oba N, Marin E, Rondinella A, Boschetto, Zhu W, Yamamoto K. "Investigation of the Osteointegration Characteristics of a Silicon Nitride Intervertebral Spinal Spacer: A Retrieval Study." 7<sup>th</sup> International Conference Advances in Orthopaedic Osseointegration, San Diego, CA, March 12-13, 2017.
65. **Bal BS**, Zhu W, McEntire BM, Pezzotti G. "Metal staining leads to instability of zirconia alumina femoral heads." AAOS 2017 Annual Meeting, San Diego, CA, March 14-18, 2017.

#### **INVITED MODERATOR, KEYNOTE SPEAKER**

Moderator. "Alternative Bearings and Minimally Invasive Surgery Techniques" at the University of Pennsylvania for The 7<sup>th</sup> Annual Symposium on Alternative Bearing Surfaces in Total Joint Replacement, Philadelphia, PA, October 14-15, 2004.

"Advances in Arthroplasty, An Emphasis on Treatment Options for the Young/Active Patient." Harvard University, Cambridge, MA, October 3-7, 2006.

Meeting Co-Chairman and Presenter. "Minimally Invasive Total Hip Surgery." Minimally Invasive Surgery meets Computer Assisted Orthopaedic Surgical Technology (MIS meets CAOS) in Scottsdale, AZ, October 26-28, 2006.

"MIS Total Joint Arthroplasty and other Factors Effecting Recovery." American Association of Hip & Knee Surgeons Meeting in Dallas, TX, November 3-5, 2006.

Keynote Speaker. "Hard-on-hard Bearings in THA." Moderator: "Mini-Smith Peterson and Head Damage: Hard on Hard." Hip and Knee Arthroplasty Continuing Education Course at Harvard University in Cambridge, MA, September 25-27, 2007.

Moderator. "Soft Tissue and Tachnology." Tissue Engineering of Articular Cartilage. Musculoskeletal Transplant Foundation in Vancouver, British Columbia, October 11-13, 2007.

Meeting Chairmen and Presenter. "Anterior Total Hip Arthroplasty Mini-Symposium." American Association of Hip & Knee Surgeons, November 2, 2007.

Orthopaedic Research Society in Las Vegas, NV, Feb 2009.

Regional Life Sciences Summit in Kansas City, MO, March 9, 2010.

The Anterior Approach Total Hip Arthroplasty Lab in Henderson, NV, October 21-22, 2010.

October 30, 2017

The Anterior Approach THA Cadaver Lab in Houston, TX, January 13-14, 2011.

Anterior Approach Total Hip Arthroplasty. “Anatomic Consideration and Patient Selection for the Anterior Approach” and “Learning the Anterior Approach – My Experience with the Technique (From 2-Incision to Anterior Approach).” Las Vegas, NV April 8, 2011.

“Filling the Gaps: Bone Deficiency and Treatment Options.” Missouri Musculoskeletal Conference in Kansas City, MO, July 28, 2011.

Moderator and speaker for the 11th Anniversary of the Annual Advances in Arthritis, Arthroplasty and Trauma Course in St. Louis, Missouri, April 26-28, 2012.

“Custom Implants in Joint Replacement.” Meeting of the Morgan-Stanley Investment Banking Group, Boston, MA, March 28, 2013.

“Closed Medical Negligence Claims Can Drive and Reduce Litigation.” The 4<sup>th</sup> Annual Pegalis and Erickson Lectureship, New York, New York, April 9, 2013.

“Reducing Liability Risk and Improving Quality: Role of the Orthopaedic Executive.” 2013 Annual American Association of Orthopaedic Executives, San Diego, CA, April 28-30, 2013.

Faculty Panel Presenter. “Perioperative Management THA. AAOS/AAHKS Challenges and Controversies in Total Joint Arthroplasty, Rosemont, IL. May 3, 2013.

Lab Faculty. “Primary THA (Direct THA/Mini Posterior).” AAOS/AAHKS Challenges and Controversies in Total Joint Arthroplasty, Rosemont, IL. May 3, 2013.

Lab Faculty. “Revision THA (Trochanteric Osteotomy, Augment, Cage).” AAOS/AAHKS Challenges and Controversies in Total Joint Arthroplasty, Rosemont, IL. May 3, 2013.

Lab Faculty. “Primary TKA.” AAOS/AAHKS Challenges and Controversies in Total Joint Arthroplasty, Rosemont, IL. May 4, 2013.

Lab Faculty. “Revision TKA.” AAOS/AAHKS Challenges and Controversies in Total Joint Arthroplasty, Rosemont, IL. May 4, 2013.

Informed Consent and Risk Awareness in the Operating room Environment given to the Operating Room staff on October 2, 2013.

Moderator: "Contemporary Medico-Legal Issues in Orthopaedic Surgery." 2014 AAOS Annual Meeting, in New Orleans, Louisiana, March 11-15, 2014.

Invited Faculty: “Integrating the Anterior Approach Into Practice: minimizing your learning curve.” “History and Role of the Old and New Technology.” Short Stems do we need them?” “Most Total Knees Have Same Geometry on Both Sides.” “Smart Trials – Unnecessary?” State-of-the-Art Solutions in the Hip and Knee Reconstruction, in Chicago, IL, June 27-28, 2014.

**Bal BS**, Brenner LR. Symposium 4 – Medical Liability Update. 32nd Annual Southern Orthopaedic Association Annual Meeting, Asheville, NC, July 15-18, 2015.

Invited speaker: Avoidable complications in knee surgery that invite litigation; Resident liability in medical negligence claims; Joint medical and legal complications of total hip arthroplasty. 16th Annual Multispecialty Conference- Medical Negligence and Risk Management in Medicine, Surgery, Emergency Medicine, Radiology, and Family Medicine, in the Bahamas, January 5-8, 2016.

Moderator: “Panel Discussion: Collaborating with FDA to Ensure Medtech Approval.” 7<sup>th</sup> Annual Life Science Chief Executive Officer Forum, in Atlanta, GA, January 25-26, 2016.

Invited Scholar: “Silicon nitride for orthopaedics – A bioactive and interactive non-oxide ceramic.” Kyoto Institute for Technology Mini-Symposium, Sakyo-ku, Kyoto, Japan, February 22, 2016.

Invited speaker: “Bioactive silicon nitride: A new therapeutic material for osteoarthropathy.” Texas A&M College of Dentistry “Pathways to Excellence” seminar on March 8, 2017.

### **MAJOR LECTURES AND VISITING PROFESSORSHIPS**

Visiting Professor: Collaborative research in silicon nitride ceramics. Kyoto Institute of Technology, Osaka, Japan. July 20-26, 2015.

Grand Rounds Lecture: Liability, Standards, and the Future of Medical Malpractice. University of South Alabama, Mobile, AL. August 8, 2014.

Grand Rounds Lecture: Legal Liability During Residency Training. University of Southern California, Los Angeles, CA. June 8, 2012.

Grand Rounds Lecture: Anterior Total Hip Replacement –Affirmative. Louisiana State University, Shreveport, LA. September 23, 2011.

Dinner Lecture: Medical Liability of Physicians in Training. Louisiana State University, Shreveport, LA. September 22, 2011.

### **RESEARCH GRANT APPLICATIONS**

#### **Principal Investigator:**

Arthritis Foundation: “Comparison of tissue-engineered osteochondral grafts fabricated with mesenchymal stem cells and trabecular metal or allograft bone.” \$199,997.00. 6/1/2005 to 5/31/2007.

Pfizer Inc.: “Comparison of tissue-engineered osteochondral grafts fabricated with mesenchymal stem cells and trabecular metal or allograft bone.” \$199,999.00. 7/1/2005 to 7/1/2007.

Musculoskeletal Transplant Foundation: “Comparison of tissue-engineered osteochondral grafts fabricated with mesenchymal stem cells and trabecular metal or allograft bone.” \$100,000.00.

7/1/2005 to 6/30/2007. (Awarded)

Aircast Foundation: "Development of osteoarthritis in transgenic mice with increased SAF-1 expression in articular cartilage." \$99,998.00. 8/1/2005 to 7/31/2007.

National Health Institute: "Development of osteoarthritis in transgenic mice with increased SAF-1 expression in articular cartilage." \$404,248.00. 10/1/2005 to 9/30/2007.

Zimmer Holdings, Inc.: "Comparison of tissue-engineered osteochondral grafts fabricated with mesenchymal stem cells and trabecular metal or allograft bone." \$125,406.00. 5/25/2006 to 5/24/2007 (Awarded)

Orthopaedic Research and Education Foundation: "Comparison of tissue-engineered patellar osteochondral grafts fabricated from mesenchymal stem cells and bioactive glass or trabecular tantalum metal." \$150,625.00. 7/1/2007 to 6/30/2010.

National Institute of Health: "Novel freeze-cast bioactive glass scaffolds for bone repair." \$108,472.00. 1/1/2009 to 12/31/2010. (Awarded)

Missouri Life Science Research Board: "Missouri consortium for biomaterials research and commercialization." \$292,287.00. 1/1/2009 to 12/31/2011.

Missouri Life Science Research Board: "Tissue engineered resurfacing of the hip joint." \$198,459.00. 1/1/2009 to 12/31/2011.

Missouri Life Science Research Board: "Research on freeform fabrication of objects with graded bio-materials." \$105,283.00. 1/1/2009 to 12/31/2011.

Orthopaedic Research and Education Foundation: "Bioactive glass scaffolds for bone repair." \$131,328.00. 7/1/2009 to 6/30/2012.

Department of Health and Human Services: "Novel freeze-cast bioactive glass scaffolds." \$108,482.00. 8/19/09 to 7/31/12.

National Institute of Health: "Functional tissue-engineered osteochondral composite constructs." \$254,701.00. 10/15/2009 to 10/14/2011.

Missouri Life Science Research Board: "Research of freeform fabrication of objects." \$105,284.00. 1/1/2010 to 12/31/2012.

Missouri Life Science Research Board: "Missouri consortium for biomaterials research and commercialization." \$400,001.00. 1/1/2010 to 12/31/2012.

Missouri Life Science Research Board: "Ceramic-metal composite femoral head for total hip arthroplasty." \$125,826.00. 2/1/2010 to 1/31/2012.

Missouri Life Science Research Board: "Development of a hybrid metal-bioactive glass material



for skeletal repair.” \$123,955.00. 1/1/2011 to 12/31/2012.

National Institute of Health: “Bioengineering research partnership: bioactive glass in regenerative medicine.” \$719,725.00. 8/1/2011 to 7/31/2016.

Orthopedic Research Society: “Faculty career development through the orthopaedic research society's collaborative exchange award.” \$7,501.00. 10/1/2011 to 9/30/2012.

Musculoskeletal Transplant Foundation: “Fabrication and testing of a canine biological femoral head arthroplasty.” \$301,106.00. 1/1/2012 to 12/31/2014.

National Institute of Health: “Bioactive glass in osteochondral tissue engineering.” \$138,969.00. 1/1/2012 to 12/31/2013.

Musculoskeletal Transplant Foundation: “Bioactive glass in skeletal regeneration.” \$0.00. 1/1/2012 to 12/31/2014.

National Institute of Health: “Bioactive glass in regenerative medicine.” \$114,638.00. 5/1/2012 to 4/30/2017.

Orthopaedic Research and Education Foundation: “Fabrication and testing of a canine biological femoral head arthroplasty.” \$223,932.00. 7/1/2012 to 6/30/2015.

Department of Defense: “Bicompatible device for repairing segmental bone defects.” \$292,335.00. 7/1/2012 to 6/30/2014.

Consultant for a NIH SBIR research project “Silorane based bone cements” proposal by Nanova and UMKC. Grant pending.

Career Development Grant, Orthopaedic Research and Education Foundation: “Fabrication and testing of a biological femoral head arthroplasty.” \$224,995. 7/1/2014 to 6/30/2017.

University of Missouri Interdisciplinary Intercampus Research Program (IDIC): Healing Chronic Bone Infection Using Bioactive Glass. \$145,000. 8/1/2014 to 7/31/2015. (Awarded)

Bal BS, Rahaman M, Tarka M. Constrained Ball-and-Socket Design for Total Hip Replacement University of Missouri FastTrack Initiative. 7/1/2015-6/30/2016; \$50,000. (Awarded)

Bal BS, Rahaman M. Constrained Ball-and-Socket Design for Total Hip Replacement, Coulter Foundation Development Grant. 7/1/2017-6/30/2018; \$100,000. (Awarded)

**Co-Investigator:**

National Science Foundation: “MRSEC interactions & transformation at membrane interfaces.” \$22,774,108.00. 9/1/2005 to 8/30/2011.

Musculoskeletal Transplant Foundation: “Characterization of pathology of the knee menisci for optimizing diagnosis and treatment of meniscal disorders.” \$56,252.00. 1/1/2007 to 12/31/2007.

Orthopaedic Research and Education Foundation: “Characterization of pathology of the knee menisci for optimizing diagnosis and treatment of meniscal disorders.” 7/1/2007 to 6/30/2008.

Arthritis Foundation: “Analysis of regional chondrocyte metabolism in canine and human OA patients.” \$200,000.00. 7/1/2007 to 6/30/2009.

National Institute of Health: “Synovial fluid molecules pertaining to toll-like receptors as biomarkers of osteoarthritis followed by acute knee injury.” \$ 789,738.00. 10/1/2009 to 9/30/2011.

National Football League: “Characterization of pathology of the knee menisci for optimizing diagnosis and treatment of meniscal disorders.” \$119,252.00. 1/1/2010 to 6/30/2012.

Arthritis Foundation: “Synovial fluid derived biomarkers in osteoarthritis.” \$74,800.00. 6/1/2011 to 5/31/2012.

National Institutes of Health: “Center of research translation.” \$7,233,877.00. 7/1/2012 to 6/30/2017.

Coulter Foundation: “Nano-radiosynovectomy for osteoarthritis treatment” \$41,976.00. 09/01/2012 to 08/31/2013.

Nutramax Lab, Inc. “Clinical pilot study assessing the structure/function efficacy in a knee OA patient cohort following consumption of a novel nutraceutical blend containing glucosamine, chondroitin sulfate, avocado/soybean unsaponifiables (ASU) and AKBA.” \$100,980 (\$80,143 direct; \$20,837 indirect). 1/1/2014 to 12/1/2016.

National Institutes of Health: “Structural bone repair using strong porous bioactive scaffolds with enhanced osteogenic capacity. \$92,034. 9/21/2014 to 8/31/2017. *Submitted.*

### **Key Personnel on Grants:**

AO Research Fund: “Characterizing knee menisci pathology for optimal diagnosis and treatment of meniscal disorders.” \$51,380.00. 8/1/2009 to 7/31/2009.

National Institute of Health: “Creation of new musculoskeletal engineering faculty position.” \$1,365,092.00. 10/1/2009 to 9/30/2011.

National Institute of Health: “Characterization of pathology of the knee menisci for optimizing diagnosis and treatment of meniscal disorders.” \$227,250.00. 4/1/2010 to 3/31/2013.

National Institute of Health: “Fabrication and testing of a canine biological femoral head arthroplasty.” \$218,495.00. 7/1/2012 to 6/30/2015.

### **PUBLICATIONS**

**Peer-reviewed journal articles:**

1. Fantini GA, Shiono S, **Bal BS**, Shires GT. Adrenergic mechanism contribute to alterations in regional perfusion during normotensive E. coli bacteremia. *J Trauma*. 1989 Sep;29(9):1252-7.
2. **Bal BS**, Gurba DM. Coumadin-induced necrosis of the skin after total knee replacement. A case report. *J Bone Joint Surg Am*. 1991 Jan;73(1):129-30.
3. Chen Y, **Bal BS**, Gorski JP. Calcium and collagen binding properties of osteopontin, bone sialoprotein, and bone acidic glycoprotein-75 from bone. *J Biol Chem*. 1992 Dec 5;267(34):24871-8.
4. **Bal BS**, Jones L Jr. Arthroscopic resection of a chondroblastoma in the knee. *Arthroscopy*. 1995 Apr;11(2):216-9.
5. **Bal BS**, Sampath SAC, Burke DW. A technique for cementing the patella component in total knee arthroplasty. *Am J Orthop*. 1995 Apr;24(4):358.
6. **Bal BS**. A technique for comparison of leg lengths during total hip arthroplasty. *Am J Orthop*. 1996 Jan;25(1):61-2.
7. McGrory BJ, **Bal BS**, Harris WH. Current concepts of six trochanteric osteotomies for total hip arthroplasty. *J Am Acad Orthop Surgeons*. 1996;4:258-67.
8. **Bal BS**, Sandow T. Bilateral femoral neck fractures with negative bone scans. A case report. *Orthopaedics*. 1996 Nov;19(11):974-6.
9. **Bal BS**, Jiranek W, Harris WH. Periprosthetic osteolysis around an uncemented endoprosthesis. A Case Report. *J Arthroplasty*. 1997;12(3):346-9.
10. **Bal BS**, Maurer B, Harris W. Trochanteric union following revision total hip arthroplasty. *J Arthroplasty*. 1998 Jan;13(1):29-33.
11. **Bal BS**, Vandellune D, Gurba DM, Jasty M, Harris WH. Polyethylene wear in cases using femoral stems of similar geometry, but different metals, porous layer, and modularity. *J Arthroplasty*. 1998 Aug;13(5):492-9.
12. **Bal BS**, Maurer T, Harris W. Revision of the acetabular component without cement after a previous acetabular reconstruction with use of a bulk femoral head graft in patients who had congenital dislocation or dysplasia. *J Bone Joint Surg Am*. 1999 Dec;81(12):1703-6.
13. Ray A, Kuroki K, Cook JL, **Bal BS**, Kenter K, Aust G, Ray BK. Induction of matrix metalloproteinase 1 gene expression is regulated by inflammation-responsive transcription factor SAF-1 in osteoarthritis. *Arthritis Rheum*. 2003 Jan;48(1):134-45.
14. Oonishi H, Kim SC, Clarke I, Asano T, **Bal BS**, Kyomoto M, Masuda S. Retrieved ceramic total knee prosthesis in clinical use for 23 years. *Key Eng Mater* Vols. 240-242,

pp. 797-800, 2003.

15. Keshavan H, **Bal BS**, Morsi K. Preliminary investigation into the production of grain-size functionally gradient materials for artificial hip implant applications, TMS Annual Meeting, Symposium: Surface Engineering: In *Materials Science II*, Mar 2-6 2003, San Diego, CA, United States, 2003, p 233-41.
16. Morsi K, Keshavan H, **Bal BS**. Processing of grain-size functionally gradient bioceramics for implant applications. *J Mater Sci MaterMed*. 2004 Feb;15(2):191-7.
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Editor-in-Chief, American Legal Forum, Orthopaedic Medical Legal Advisor Bulletin since

November 2005.

Elite reviewer on the Editorial Board, *Journal of Arthroplasty*, September 2006 to December 2016.

ABJS Member Associate Editors Board, *Clinical Orthopaedics and Related Research*, 2006 to present.

Guest Editor, *Journal of Bone and Joint Surgery*, May 2007 to December 2016.

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Reviewer, MU Research Board, Fall 2013: Patient-Specific Rehabilitation in Knee Osteoarthritis (PI, Sayers S).

Editor-in-Chief, *Open Access Surgery*. August 2012 to April 21, 2014.

Honorary Editorial Board of *Open Access Surgery*. April 22, 2014 to present.

Editorial Board, *Arthroplasty Today*, peer-review journal of AAHKS. July 2, 2014 to present.

Musculoskeletal Transplant Foundation, Established Investigator Grant Reviewer 2014.

MU Research Board Peer Grant Reviewer 2014.

Reviewer of abstracts for the 2016 Annual Orthopaedic Research Society Meeting, September 2015.



Associate Editor of Basic Science, Biomechanics and Kinesiology at *The Knee Journal*.  
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### **PHILANTHROPY**

Founder, The Sonny and Dana Bal Orthopaedic Endowment. Award funds for orthopaedic educational and scientific endeavors at the University of Missouri-Columbia.

“Substrates for Osteochondral Tissue Engineering.” Research grant and work in progress with Columbia University, New York and The Comparative Orthopaedic Laboratory, University of Missouri, Columbia. Total budget is \$15,764.27.

Very Distinguished Fellows- Diplomats, Jefferson Club 2006-2007. Members support translates into student scholarships, nationally recognized faculty, groundbreaking research and state-of-the-art facilities that enhance the University’s reputation and stature.

### **PATENTS AND INTELLECTUAL PROPERTY**

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**Operative Notes**

**Op Note signed by Bryan S Russell, DPM at 11/11/2015 8:34 AM**

Version 1 of 1

Author: Bryan S Russell, DPM

Service: Podiatry

Author Type: Doctor of Podiatric  
Medicine

Filed: 11/11/2015 8:34 AM

Note Time: 11/9/2015 1:46 PM

Status: Signed

Editor: Bryan S Russell, DPM (Doctor of Podiatric Medicine)

DATE OF ADMISSION: 11/09/2015

DATE OF OPERATION: 11/09/2015

SURGEON: Bryan S. Russell, DPM

**PREOPERATIVE DIAGNOSES**

1. Deltoid avulsion with pain and a spiral oblique fracture distal fibular Weber B with clinical syndesmosis injury.
2. Small ganglion cyst or soft tissue mass proximal lateral aspect of the 5th metatarsal metaphyseal diaphyseal junction, left.

**POSTOPERATIVE DIAGNOSES**

1. Deltoid avulsion with pain and a spiral oblique fracture distal fibular Weber B with clinical syndesmosis injury.
2. Small ganglion cyst or soft tissue mass proximal lateral aspect of the 5th metatarsal metaphyseal diaphyseal junction, left.
3. Postoperative-op stability with the ankle - no instability with the syndesmosis once fixing of the distal fibula.

**OPERATION PERFORMED**

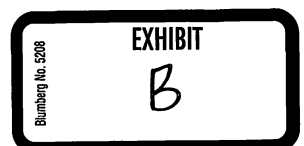
1. Open reduction and internal fixation of distal fibula.
2. Intraoperative C-arm to evaluate stressing of the syndesmosis, which was stable upon fixing the fibula.
3. Removal of soft tissue mass proximal aspect, 5th metatarsal, left.
4. Amnioc graft placement.

COMPLICATIONS: None.

HEMOSTASIS: Via calf tourniquet at 250 mmHg.

ANESTHESIA: Local MAC, also popliteal fossa block with minimal anesthetic control.

BRIEF MEDICAL HISTORY: The patient was seen in clinic complaining of pain in regards to her left ankle. I did again talk to her about the



Operative Notes (continued)

Op Note signed by Bryan S Russell, DPM at 11/11/2015 8:34 AM  
(continued)

Version 1 of 1

risks and benefits of the surgery, as well as non-operative treatment including but not fully encompassing bruising, bleeding, numbness, tingling, swelling, possible need for further surgery, malunion, nonunion, still ongoing arthrosis even with fixing as well as the potential for ongoing damage to the ankle, even without repair of the syndesmosis to name a few. Otherwise, please refer to my clinic note for details in that regard.

OPERATIVE NOTE: The patient was brought into the operating room, was placed supine on the operating table. After anesthesia was then obtained, tourniquet was then placed proximal left ankle, pause for cause, correct extremity and correct procedure identified. Attention was then directed to the lateral side of the fibula where longitudinal incision was then performed and deepened down to subcutaneous tissue, making sure to retract vital structures and Bovie all bleeders. I was able to not harm the lateral dorsal cutaneous nerve and this was reflected appropriately as a smaller nerve.

The patient then had fracture, multiple comminuted nature, anatomically reduced with 2 lobster claws. He was then placed on a posterolateral plate in a semi-lateral semi posterolateral. That way, I could fixate the fracture more appropriately. The patient had one nonlocking screw proximal fracture and then one at the most distal aspect of the distal fracture fragment, compressing the distal spiral oblique fracture. This was an interfrag through the plate. The patient had good alignment. I placed 2 more nonlocking screws at the central aspect of the plate, getting good compression noted with this.

The most proximal aspect of the fracture still had a little bit of a step-off at the lateral x-ray, but again, because of the anatomic nature, was noted at the distal aspect of the fibula and the syndesmosis was no longer unstable. I did not try to throw an AP screw for the most proximal aspect. I placed one nonlocking screw at the most distal hole. The 2 screws proximal to this were nonlocking and then I placed nonlocking in the most proximal screw hole and then one just distal to that was locking. The patient did have this incision reapproximated with Vicryl as well as with nylon. I did place an Amniox graft. Finally, the last incision was performed at the dorsal aspect of the 5th metatarsal base. I was able to resect the soft tissue mass, which was fully encapsulated. It measured approximately 0.5 cm in diameter. There were no abnormalities with the distal, proximal or superior inferior aspects of the soft tissue mass in regards to different appearance to the skin. This was flushed with

WS Paulding Hospital  
2518 Jimmy Lee Smith Parkway  
Hiram GA 30141-2068  
IP Abstract Health Info

PERRON,CHRISTINE DIANE  
MRN: 561894928  
DOB: 1/30/1961, Sex: F  
Adm:11/9/2015, D/C:11/9/2015

**Operative Notes (continued)**

Op Note signed by Bryan S Russell, DPM at 11/11/2015 8:34 AM  
(continued)

Version 1 of 1

copious amounts of normal sterile saline. I made sure that all of the ganglion mass was removed or soft tissue mass. Then, I reapproximated this after placing Amniox in the graft and used nylon for this. Xeroform, as well as sterile bandage was placed over this. The patient was placed into a Bobby Jones splint. He will remain nonweightbearing on the left lower extremity and will be followed back up in approximately 14 days.

Bryan S. Russell, DPM  
Podiatry

BR:WEB JOB #: 3714418 DOC #: :1848088  
D: 11/09/2015 13:46:00  
T: 11/09/2015 14:34:42  
E: 11/10/2015 06:20:23

Electronically Signed by Bryan S Russell, DPM on 11/11/2015 8:34 AM

**Brief Op Note by Bryan S Russell, DPM at 11/9/2015 1:39 PM**

Version 1 of 1

Author: Bryan S Russell, DPM

Service: Podiatry

Author Type: Doctor of Podiatric  
Medicine

Filed: 11/9/2015 1:40 PM

Note Time: 11/9/2015 1:39 PM

Status: Signed

Editor: Bryan S Russell, DPM (Doctor of Podiatric Medicine)

Christine Diane Perron

Preoperative Diagnosis: bimallaeolar ankle fracture with syndesmotoc injury left

Post-Operative Diagnosis: bimallaeolar ankle fracture with syndesmotoc injury left

Post-Op Diagnosis Codes:

- \* Closed left ankle fracture [S82.892A]
- \* Soft tissue mass [M79.9]

Procedure(s):

ORIF ANKLE, SOFT TISSUE MASS

Surgeon(s) and Role:

- \* Bryan S Russell, DPM - Primary

Anesthesia: APS/BLK

Findings: Small ganglion with no syndesmotoc instability once the fibula was fixed

WS Paulding Hospital  
2518 Jimmy Lee Smith Parkway  
Hiram GA 30141-2068  
IP Abstract Health Info

PERRON, CHRISTINE DIANE  
MRN: 561894928  
DOB: 1/30/1961; Sex: F  
Adm: 11/9/2015, D/C: 11/9/2015

**Operative Notes (continued)**

Brief Op Note by Bryan S Russell, DPM at 11/9/2015 1:39 PM  
(continued)

Version 1 of 1

**Implant(s):**

Implant Name	Type	Inv. Item	Serial No.	Manufacturer	Lot No.	LRB	No. Used	Action
GRAFT AMNIO CRPRS NEOX1K 6X3CM - LOG202341	Implant	11111		AMNIOX MEDICAL		Left	1	Implanted

**Specimen/Device Removed:**

ID	Type	Source	Tests	Collected by	Time	Destination
1 : left foot mass				Bryan S Russell, DPM	11/9/2015 1335	Pathology

Estimated Blood Loss: less than 50 mL

Bryan S Russell, DPM

November 9, 2015

1:39 PM

Electronically Signed by Bryan S Russell, DPM on 11/9/2015 1:40 PM

## Progress Note

<b>Patient Name:</b> Christine Perron	<b>Visit Date:</b> November 18, 2015
<b>Patient ID:</b> 1113276	<b>Provider:</b> BRYAN RUSSELL, DPM
<b>Sex:</b> Female	<b>Location:</b> Douglasville Village Podiatry
<b>Birthdate:</b> January 30, 1961	<b>Location Address:</b> 6084 Professional Pkwy Ste B Douglasville, GA 301345613
<b>Primary Care Provider:</b> Michael Miles MD	<b>Location Phone:</b> 6788384443
<b>Referring Provider:</b> Michael Miles MD	

### Chief Complaint

- Post operative follow up

### History Of Present Illness

The patient is a 54 year old Caucasian/White female who presents for a post-op visit. The injury occurred on 11/02/2015.

#### **Mechanism of Injury:**

The patient was fixing a water leak on her roof and fell, and turned the ankle. She reports experiencing immediate pain, swelling after several minutes, discoloration, weakness, and feeling the ankle "pop". The discomfort is currently moderate to severe in intensity and has an aching, a throbbing, and sharp quality. It radiates into the toes. The weakness is moderate involves dorsiflexion, plantar flexion, inversion, and eversion. She denies any additional injury.

#### **Recent Care:**

She was seen in the Emergency Room immediately following the injury. Evaluation at that time revealed a fracture. The patient was immobilized in a splint and prescribed pain medication and self-referred to this office.

The patient returns for a post-operative visit after undergoing ORIF ankle and cyst removal left, ten days ago.

She has nausea and calf pain noted with emesis during clinic.

She is recovering at home and is non-weightbearing.

She had surgery for a bi-malleolar fracture on November 9th. She is here today stating that she is nauseated, dizzy, light-headed, short of breath with pain in the foot, ankle, and calf.

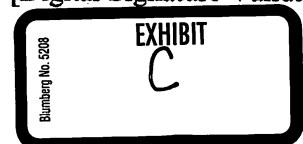
### Past Medical History

Disease Name	Date Onset	Notes
Acid Reflux/GERD	--	--
Arthralgia of left ankle	10/01/2015	--
Bursitis	--	--
Cataract	--	--
Fracture - Ankle	--	--
Heart Murmur	--	--
Hiatal Hernia	--	--
Hypo (low) thyroid	--	--
Joint Instability	--	--
Joint Stiffness	--	--
Low Blood Pressure	--	--
Muscle Spasms	--	--
Peroneal tendinitis, left	10/01/2015	--
Plantar Fasciitis	--	--
Rheumatoid Arthritis	--	--
Spider Veins	--	--
Sprain of left ankle, unspecified ligament, sequela	10/01/2015	--
Unequal Leg Length	--	--
Varicose Veins	--	--

### Past Surgical History

Procedure Name	Date	Notes
*Other Surgery	--	Heart Cath

[Digital Signature Validated]



**Medication List**

Name	Date Started	Instructions
cyclobenzaprine 7.5 mg oral tablet	11/12/2015	take 1 tablet (7.5 mg) by oral route 3 times per day for 14 days
Duexis 800-26.6 mg oral tablet		take 1 tablet by oral route 3 times per day
tramadol 50 mg oral tablet	11/03/2015	take 1 tablet (50 mg) by oral route every 6 hours as needed for 28 days
Vicodin 5-300 mg oral tablet	11/18/2015	take 2 tablets by oral route every 6 hours as needed for pain

**Allergy List**

Allergen Name	Date	Reaction	Notes
naproxen	--	--	--
Other	--	--	fruit
seasonal allergies	--	--	--

**Family Medical History**

Disease Name	Relative/Age	Notes
Family History of Heart Disease	/	--
Family History of Arthritis	/	--
Family History of Cancer	/	--
	Mother/	
	Mother/	
	Mother/	

**Social History**

Finding	Status	Start/Stop	Quantity	Notes
Alcohol	Light	--/--	--	--
Single	--	--/--	--	--
Tobacco	Former	--/--	--	--

**Review of Systems**

**Constitutional**

- o Denies : Fatigue, Malaise, Weight Loss, Fever, Body Aches, Chills, Night Sweats, Loss of Appetite

**Eyes**

- o Denies : Discharge from Eye, Double Vision, Floaters, Eye Discomfort/Pain, Impaired Vision, Foreign Body Sensation, Blurred Vision, Changes in Vision

**HENT**

- o Denies : Headaches, Nasal Discharge, Recent Head Injury, Sore Throat, Nose Bleeding, Dental or Gum Disease, Lightheadedness, Neck Stiffness, Nasal Congestion, Thyroid Mass, Dentures, Dizziness, Neck Pain, Sinus Pain, Hoarseness

**Cardiovascular**

- o Denies : chest pain with exertion, palpitations, cardiac arrest, pacemaker/defibrillator, varicosities, lower extremity edema, claudication

**Respiratory**

- o Denies : Shortness of Breath, Pain with Breathing, Painful Cough, Productive Cough, Difficulty Breathing, Coughing up Blood, Wheezing

**Gastrointestinal**

- o Denies : Nausea, Constipation, Blood in Stools, Abdominal Pain, Vomiting, Gallstones, Heartburn, Black Stools, Diarrhea, Loss of Appetite, Jaundice, Eating Disorder

**Genitourinary**

- o Denies : Urinary Frequency, Possible Pregnancy, Painful/Difficulty Urinating, Blood in Urine, Kidney Stones, Pelvic Pain

**Integument**

- o Denies : Rash, Dry Skin, Acne, Itching, Change/Loss Hair Growth, Skin/Mole Changes in Pigmentation, Discolored,



Thickened, or Damaged Nails, Blisters, Ingrown Nail

**Neurologic**

- o Denies : Muscle Weakness, Loss of Muscle Control, Loss of Coordination, Loss of Balance, Numbness, Tingling, Tremors, Seizures, Dizziness, Paralysis, Difficulty with Speech, Loss of Consciousness, Loss of Sensation, Memory Loss/Confusion

**Musculoskeletal**

- o Denies : Muscle Weakness, Joint Stiffness, Joint Swelling, Muscle Cramps, Limitation of Motion, Leg Swelling, Instability, Ankle Weakness and/or Leg Pain, Foot Pain, Ankle Pain, Knee Pain, Leg Pain, Hip Pain, Joint Pain/Other

**Endocrine**

- o Denies : heat intolerance, cold intolerance, Loss of Hair, Weight Gain/Loss

**Psychiatric**

- o Denies : anxiety, depression, Bi-polar, difficulty sleeping, Hallucinations

**Heme-Lymph**

- o Denies : easy bleeding, easy bruising, Enlarged Lymph Nodes

**Vitals**

Date	Time	BP	Position	Site	L/R	Cuff Size	HR	RR	TEMP(F)	WT	HT	BMI		
												kg/m <sup>2</sup>	BSA m <sup>2</sup>	O2 Sat
11/03/2015	01:50 PM									170lbs 0oz	5' 5"	28.29	1.88	
11/18/2015	02:22 PM									170lbs 0oz	5' 5"	28.29	1.88	

**Physical Examination**

**Left Lower Extremity**

- o **Lower Leg** : pain to the distal lateral ankle with the fibula. No observable knee deformity or malalignment. No palpable defects. No masses present.
- o **Ankle** :
  - **Inspection/Palpation** : incision intact with mild pain to the lateral ankle.
  - **Range of Motion** : deferred
  - **Stability** : stable mortise
  - **Strength** : deferred
- o **Foot** : Rectus foot type. sutures intact
- o **Skin** : Skin texture, turgor and color are intact with ecchymosis and edema noted
- o **Sensation** : Protective sensations are intact, equal and symmetrical.
- o **Reflexes** : deferred
- o **Vascular Exam** : Dorsalis pedis artery pulse palpable at 2/4. Posterior tibial artery pulse palpable at 2/4.

**----- Radiology Results -----**

- o **Left Ankle X-Ray** : AP, Lateral, Oblique views taken: HW intact with stable ankle mortise

**Assessment**

- Fracture - Bimalleolar (closed) 824.4/S82.843A
- Ganglion - unspecified 727.43/M67.40

**Plan**

**Orders**

- o X-RAY EXAM OF ANKLE - 3 Views-Left (73610-LT) - 824.4/S82.843A, 727.43/M67.40 - 11/18/2015
- o Post-Op Follow Up Visit (99024) - 824.4/S82.843A, 727.43/M67.40 - 11/19/2015

**Instructions**

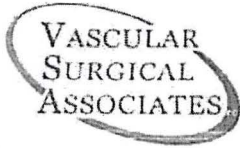
- o Discussed with patient the condition and treatment options.
- o Recommend rest, ice, and elevation.
- o Ambulate, non-weight bearing
- o X-rays reviewed with patient
- o Follow-up 1 week for suture removal.
- o Patient seen and examined today in the office.
- o New dry, sterile dressing applied to surgical site and re splinted

- Discussed with patient post operative progress.
- Contact office with any questions or concerns.
- patient is going to have Vicodin given and she is going to stop the Percocet. she was sent to VSA a for DVT eval and this was negative.

**Disposition**

- Return Visit Request in/on 1 week +/- 2 days (36418).

**Electronically Signed by:** BRYAN RUSSELL, DPM -Author on November 19, 2015 11:56:28 AM



Douglasville  
6002 Professional Pkwy., Suite 240. Douglasville, GA 30134  
Phone: 770-874-0572



Marietta - Austell Douglasville - Hiram - Woodstock - Canton - KOP - East Cobb  
David Hafner, MD Gary Jacobson, MD Sharq Sayeed, MD Heather Sweetwood, PA-C  
Steven Oweida, MD Hector Dourron, MD Jeffrey Winter, MD Stephanie Rivers, PA-C  
Arun Chervu, MD Charles Wyble, MD Ryan Messick, PA-C Krystin Brinker, PA-C  
Jeffrey Reilly, MD John Jones, MD

### Lower Extremity Venous Duplex

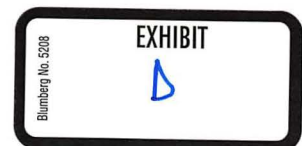
Patient: CHRISTINE PERRON DOB: 01/30/1961 Exam Date: 11/18/2015 12:53:44 PM  
Referring: Bryan Russell DPM MRN: 608030 Technologist: Brooke Hunsicker RVT  
Indications/ICD10: M79.605 Pain in left leg  
History: Patient states she had left ankle surgery on 11-09-15; pain in left calf/foot x's 1 day.  
Previous: None  
Study Quality: Fair  
Scan Limitation: Positioning

**Findings:** B-mode imaging, color-flow Doppler and pulsed Doppler spectral waveform analysis are used to evaluate venous flow characteristics. Common femoral vein, femoral vein, popliteal vein, tibial veins and calf muscle veins were imaged in their entirety. Respiratory variations, compression and augmentation demonstrate normal responses in the left lower extremity deep veins. \*Left only per orders.

### Impression

1. No evidence of superficial or deep vein thrombosis in the left lower extremity.
2. Findings phoned to Jess's voicemail at Dr. Russell's office; 1:37 pm.

Electronically signed on 11/18/2015 4:52:34 PM. Reading Physician: Dourron, Hector MD



## Progress Note

<b>Patient Name:</b> Christine Perron	<b>Visit Date:</b> December 8, 2015
<b>Patient ID:</b> 1113276	<b>Provider:</b> BRYAN RUSSELL, DPM
<b>Sex:</b> Female	<b>Location:</b> Douglasville Village Podiatry
<b>Birthdate:</b> January 30, 1961	<b>Location Address:</b> 6084 Professional Pkwy
<b>Primary Care Provider:</b> Michael Miles MD	Ste B
<b>Referring Provider:</b> Michael Miles MD	Douglasville, GA 301345613
	<b>Location Phone:</b> 6788384443

### Chief Complaint

- Post operative follow up

### History Of Present Illness

The patient is a 54 year old Caucasian/White female who presents for a post-op visit The injury occurred on 11/02/2015.

#### **Mechanism of Injury:**

The patient was fixing a water leak on her roof and fell. and turned the ankle. She reports experiencing immediate pain, swelling after several minutes, discoloration, weakness, and feeling the ankle "pop". The discomfort is currently moderate to severe in intensity and has an aching, a throbbing, and sharp quality. It radiates into the toes. The weakness is moderate involves dorsiflexion, plantar flexion, inversion, and eversion. She denies any additional injury.

#### **Recent Care:**

She was seen in the Emergency Room immediately following the injury. Evaluation at that time revealed a fracture. The patient was immobilized in a splint and prescribed pain medication and self referred to this office.

The patient returns for a post-operative visit after undergoing ORIF ankle and cyst removal left. four weeks ago.

She reports no nausea, vomiting, fever, chills

She is recovering at home and is non weightbearing.

She had surgery for a bi-malleolar fracture on November 9th. patient feeling better and has better pain control. deep peroneal and lateral dorsal cutaneous nerve irritation

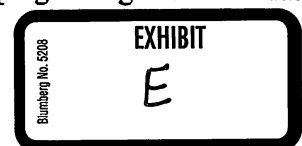
### Past Medical History

Disease Name	Date Onset	Notes
Acid Reflux/GERD	--	--
Arthralgia of left ankle	10/01/2015	--
Bursitis	--	--
Cataract	--	--
Fracture - Ankle	--	--
Heart Murmur	--	--
Hiatal Hernia	--	--
Hypo (low) thyroid	--	--
Joint Instability	--	--
Joint Stiffness	--	--
Low Blood Pressure	--	--
Muscle Spasms	--	--
Peroneal tendinitis, left	10/01/2015	--
Plantar Fascitis	--	--
Rheumatoid Arthritis	--	--
Spider Veins	--	--
Sprain of left ankle, unspecified ligament, sequela	10/01/2015	--
Unequal Leg Lenth	--	--
Varicose Veins	--	--

### Past Surgical History

Procedure Name	Date	Notes
*Other Surgery	--	Heart Cath

[Digital Signature Validated]



**Medication List**

<b>Name</b>	<b>Date Started</b>	<b>Instructions</b>
cyclobenzaprine 7.5 mg oral tablet	11/12/2015	take 1 tablet (7.5 mg) by oral route 3 times per day for 14 days
Duexis 800-26.6 mg oral tablet		take 1 tablet by oral route 3 times per day
tramadol 50 mg oral tablet	11/24/2015	take 1 tablet (50 mg) by oral route every 6 hours as needed for 28 days

**Allergy List**

<b>Allergen Name</b>	<b>Date</b>	<b>Reaction</b>	<b>Notes</b>
naproxen	--	--	--
Other	--	--	fruit
seasonal allergies	--	--	--

**Family Medical History**

<b>Disease Name</b>	<b>Relative/Age</b>	<b>Notes</b>
Family History of Heart Disease	/	--
Family History of Arthritis	Mother/ /	--
Family History of Cancer	Mother/ /	--

**Social History**

<b>Finding</b>	<b>Status</b>	<b>Start/Stop</b>	<b>Quantity</b>	<b>Notes</b>
Alcohol	Light	--/--	--	--
Single	--	--/--	--	--
Tobacco	Former	--/--	--	--

**Review of Systems****Constitutional**

- o **Denies** : Fatigue, Malaise, Weight Loss, Fever, Body Aches, Chills, Night Sweats, Loss of Appetite

**Eyes**

- o **Denies** : Discharge from Eye, Double Vision, Floaters, Eye Discomfort/Pain, Impaired Vision, Foreign Body Sensation, Blurred Vision, Changes in Vision

**HENT**

- o **Denies** : Headaches, Nasal Discharge, Recent Head Injury, Sore Throat, Nose Bleeding, Dental or Gum Disease, Lightheadedness, Neck Stiffness, Nasal Congestion, Thyroid Mass, Dentures, Dizziness, Neck Pain, Sinus Pain, Hoarseness

**Cardiovascular**

- o **Denies** : chest pain with exertion, palpitations, cardiac arrest, pacemaker/defibrillator, varicosities, lower extremity edema, claudication

**Respiratory**

- o **Denies** : Shortness of Breath, Pain with Breathing, Painful Cough, Productive Cough, Difficulty Breathing, Coughing up Blood, Wheezing

**Gastrointestinal**

- o **Denies** : Nausea, Constipation, Blood in Stools, Abdominal Pain, Vomiting, Gallstones, Heartburn, Black Stools, Diarrhea, Loss of Appetite, Jaundice, Eating Disorder

**Genitourinary**

- o **Denies** : Urinary Frequency, Possible Pregnancy, Painful/Difficulty Urinating, Blood in Urine, Kidney Stones, Pelvic Pain

**Integument**

- o **Denies** : Rash, Dry Skin, Acne, Itching, Change/Loss Hair Growth, Skin/Mole Changes in Pigmentation, Discolored, Thickened, or Damaged Nails, Blisters, Ingrown Nail

**Neurologic**

- o **Denies** : Muscle Weakness, Loss of Muscle Control, Loss of Coordination, Loss of Balance, Numbness, Tingling,

Tremors, Seizures, Dizziness, Paralysis, Difficulty with Speech, Loss of Consciousness, Loss of Sensation, Memory Loss/Confusion

**Musculoskeletal**

- o Denies : Muscle Weakness, Joint Stiffness, Joint Swelling, Muscle Cramps, Limitation of Motion, Leg Swelling, Instability, Ankle Weakness and/or Leg Pain, Foot Pain, Ankle Pain, Knee Pain, Leg Pain, Hip Pain, Joint Pain/Other

**Endocrine**

- o Denies : heat intolerance, cold intolerance, Loss of Hair, Weight Gain/Loss

**Psychiatric**

- o Denies : anxiety, depression, Bi-polar, difficulty sleeping, Hallucinations

**Heme-Lymph**

- o Denies : easy bleeding, easy bruising, Enlarged Lymph Nodes

**Vitals**

Date	Time	BP	Position	Site	L\R	Cuff Size	HR	RR	TEMP(F)	WT	HT	BMI	
												kg/m <sup>2</sup>	BSA m <sup>2</sup> O2 Sat HC
11/03/2015	01:50 PM									170lbs 0oz	5' 5"	28.29	1.88
11/18/2015	02:22 PM									170lbs 0oz	5' 5"	28.29	1.88
12/08/2015	02:00 PM									170lbs 0oz	5' 5"	28.29	1.88

**Physical Examination**

**Left Lower Extremity**

- o **Lower Leg** : pain to the distal lateral ankle with the fibula. No observable knee deformity or malalignment. No palpable defects. No masses present.
- o **Ankle** :
  - **Inspection/Palpation** : incision intact with mild pain to the lateral ankle.
  - **Range of Motion** : deferred
  - **Stability** : stable mortise
  - **Strength** : deferred
- o **Foot** : Rectus foot type. sutures intact
- o **Skin** : Skin texture, turgor and color are intact with ecchymosis and edema noted
- o **Sensation** : Protective sensations are intact, equal and symmetrical.
- o **Reflexes** : deferred
- o **Vascular Exam** : Dorsalis pedis artery pulse palpable at 2/4. Posterior tibial artery pulse palpable at 2/4.

----- **Radiology Results** -----

- o **Left Ankle X-Ray** : AP, Lateral, Oblique views taken: HW intact with stable ankle mortise

**Assessment**

- Fracture - Bimalleolar (closed) 824.4/S82.843A
- Ganglion - unspecified 727.43/M67.40

**Plan**

**Orders**

- o X-RAY EXAM OF ANKLE - 3 Views-Left (73610-LT) - 824.4/S82.843A, 727.43/M67.40 - 12/08/2015
- o Post-Op Follow Up Visit (99024) - 824.4/S82.843A, 727.43/M67.40 - 12/08/2015

**Instructions**

- o Discussed with patient the condition and treatment options.
- o Recommend rest, ice, and elevation.
- o Ambulate, non-weight bearing
- o X-rays reviewed with patient from last visit
- o Patient seen and examined today in the office.
- o New dry, sterile dressing applied to surgical site and re splinted
- o Discussed with patient post operative progress.
- o Continue with non weightbearing.

- o Contact office with any questions or concerns.
- o Follow up 4 weeks. PT in 2 weeks and she is to use her cam walker going forward

**Disposition**

- o Return Visit Request in/on 4 weeks +/- 2 days (37406).

**Electronically Signed by:** BRYAN RUSSELL, DPM -Author on December 8, 2015 02:19:20 PM

## Progress Note

<b>Patient Name:</b> Christine Perron	<b>Visit Date:</b> January 7, 2016
<b>Patient ID:</b> 1113276	<b>Provider:</b> BRYAN RUSSELL, DPM
<b>Sex:</b> Female	<b>Location:</b> Douglasville Village Podiatry
<b>Birthdate:</b> January 30, 1961	<b>Location Address:</b> 6084 Professional Pkwy
<b>Primary Care Provider:</b> Michael Miles MD	Ste B
<b>Referring Provider:</b> Michael Miles MD	Douglasville, GA 301345613
	<b>Location Phone:</b> 6788384443

### Chief Complaint

- Post operative follow up

### History Of Present Illness

The patient is a 54 year old Caucasian/White female who presents for a post-op visit The injury occurred on 11/02/2015.

#### **Mechanism of Injury:**

The patient was fixing a water leak on her roof and fell. and turned the ankle. She reports experiencing immediate pain, swelling after several minutes, discoloration, weakness, and feeling the ankle "pop". The discomfort is currently moderate to severe in intensity and has an aching, a throbbing, and sharp quality. It radiates into the toes. The weakness is moderate involves dorsiflexion, plantar flexion, inversion, and eversion. She denies any additional injury.

#### **Recent Care:**

She was seen in the Emergency Room immediately following the injury. Evaluation at that time revealed a fracture. The patient was immobilized in a splint and prescribed pain medication and self referred to this office.

The patient returns for a post-operative visit after undergoing ORIF ankle and cyst removal left. eight weeks ago.

She reports no nausea, vomiting, fever, chills

She is recovering at home and is partial weight bearing with crutches.

She had surgery for a bi-malleolar fracture on November 9th. she does have some hypersensitivity to the ankle and has not had enough PT visits and continues to walk with her crutches with an antalgic gait

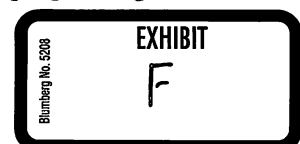
### Past Medical History

Disease Name	Date Onset	Notes
Acid Reflux/GERD	--	--
Arthralgia of left ankle	10/01/2015	--
Bursitis	--	--
Cataract	--	--
Fracture - Ankle	--	--
Heart Murmur	--	--
Hiatal Hernia	--	--
Hypo (low) thyroid	--	--
Joint Instability	--	--
Joint Stiffness	--	--
Low Blood Pressure	--	--
Muscle Spasms	--	--
Peroneal tendinitis, left	10/01/2015	--
Plantar Fasciitis	--	--
Rheumatoid Arthritis	--	--
Spider Veins	--	--
Sprain of left ankle, unspecified ligament, sequela	10/01/2015	--
Unequal Leg Lenth	--	--
Varicose Veins	--	--

### Past Surgical History

Procedure Name	Date	Notes
*Other Surgery	--	Heart Cath

[Digital Signature Validated]





**Medication List**

<b>Name</b>	<b>Date Started</b>	<b>Instructions</b>
cyclobenzaprine 7.5 mg oral tablet	12/08/2015	take 1 tablet (7.5 mg) by oral route 3 times per day for 14 days
Duexis 800-26.6 mg oral tablet		take 1 tablet by oral route 3 times per day
Percocet 5-325 mg oral tablet	12/08/2015	take 1 - 2 tablets by oral route every 4-6 hours as needed for 14 days
tramadol 50 mg oral tablet	11/24/2015	take 1 tablet (50 mg) by oral route every 6 hours as needed for 28 days

**Allergy List**

<b>Allergen Name</b>	<b>Date</b>	<b>Reaction</b>	<b>Notes</b>
naproxen	--	--	--
Other	--	--	fruit
seasonal allergies	--	--	--

**Family Medical History**

<b>Disease Name</b>	<b>Relative/Age</b>	<b>Notes</b>
Family History of Heart Disease	/	--
	Mother/	
Family History of Arthritis	/	--
	Mother/	
Family History of Cancer	/	--
	Mother/	

**Social History**

<b>Finding</b>	<b>Status</b>	<b>Start/Stop</b>	<b>Quantity</b>	<b>Notes</b>
Alcohol	Light	--/--	--	--
Single	--	--/--	--	--
Tobacco	Former	--/--	--	--

**Review of Systems****Constitutional**

- o **Denies** : Fatigue, Malaise, Weight Loss, Fever, Body Aches, Chills, Night Sweats, Loss of Appetite

**Eyes**

- o **Denies** : Discharge from Eye, Double Vision, Floaters, Eye Discomfort/Pain, Impaired Vision, Foreign Body Sensation, Blurred Vision, Changes in Vision

**HENT**

- o **Denies** : Headaches, Nasal Discharge, Recent Head Injury, Sore Throat, Nose Bleeding, Dental or Gum Disease, Lightheadedness, Neck Stiffness, Nasal Congestion, Thyroid Mass, Dentures, Dizziness, Neck Pain, Sinus Pain, Hoarseness

**Cardiovascular**

- o **Denies** : chest pain with exertion, palpitations, cardiac arrest, pacemaker/defibrillator, varicosities, lower extremity edema, claudication

**Respiratory**

- o **Denies** : Shortness of Breath, Pain with Breathing, Painful Cough, Productive Cough, Difficulty Breathing, Coughing up Blood, Wheezing

**Gastrointestinal**

- o **Denies** : Nausea, Constipation, Blood in Stools, Abdominal Pain, Vomiting, Gallstones, Heartburn, Black Stools, Diarrhea, Loss of Appetite, Jaundice, Eating Disorder

**Genitourinary**

- o **Denies** : Urinary Frequency, Possible Pregnancy, Painful/Difficulty Urinating, Blood in Urine, Kidney Stones, Pelvic Pain

**Integument**

- o **Denies** : Rash, Dry Skin, Acne, Itching, Change/Loss Hair Growth, Skin/Mole Changes in Pigmentation, Discolored,

Thickened, or Damaged Nails, Blisters, Ingrown Nail

**Neurologic**

- o **Denies** : Muscle Weakness, Loss of Muscle Control, Loss of Coordination, Loss of Balance, Numbness, Tingling, Tremors, Seizures, Dizziness, Paralysis, Difficulty with Speech, Loss of Consciousness, Loss of Sensation, Memory Loss/Confusion

**Musculoskeletal**

- o **Denies** : Muscle Weakness, Joint Stiffness, Joint Swelling, Muscle Cramps, Limitation of Motion, Leg Swelling, Instability, Ankle Weakness and/or Leg Pain, Foot Pain, Ankle Pain, Knee Pain, Leg Pain, Hip Pain, Joint Pain/Other

**Endocrine**

- o **Denies** : heat intolerance, cold intolerance, Loss of Hair, Weight Gain/Loss

**Psychiatric**

- o **Denies** : anxiety, depression, Bi-polar, difficulty sleeping, Hallucinations

**Heme-Lymph**

- o **Denies** : easy bleeding, easy bruising, Enlarged Lymph Nodes

**Vitals**

Date	Time	BP	Position	Site	L\R	Cuff Size	HR	RR	TEMP(F)	WT	HT	BMI	
												kg/m <sup>2</sup>	BSA m <sup>2</sup> O2 Sat HC
11/03/2015	01:50 PM									170lbs 0oz	5' 5"	28.29	1.88
11/18/2015	02:22 PM									170lbs 0oz	5' 5"	28.29	1.88
12/08/2015	02:00 PM									170lbs 0oz	5' 5"	28.29	1.88
01/07/2016	01:57 PM									170lbs 0oz	5' 5"	28.29	1.88

**Physical Examination**

**Left Lower Extremity**

- o **Lower Leg** : pain to the distal lateral ankle with the fibula. No observable knee deformity or malalignment. No palpable defects. No masses present.
- o **Ankle** :
  - **Inspection/Palpation** : incision intact with moderate pain to the lateral ankle, but hypersensitveity to the distal ankle. decreased ROM of the ankle , no hyperhidrosis, subjective complaints of mottling but no clinical signs, no increased hair growth at this time
  - **Range of Motion** : deferred
  - **Stability** : stable mortise
  - **Strength** : deferred
- o **Foot** : Rectus foot type. incision intact
- o **Skin** : Skin texture, turgor and color are intact with edema noted
- o **Sensation** : Protective sensations are intact, equal and symmetrical.
- o **Reflexes** : deferred
- o **Vascular Exam** : Dorsalis pedis artery pulse palpable at 2/4. Posterior tibial artery pulse palapble at 2/4.

**----- Radiology Results -----**

- o **Left Ankle X-Ray** : AP, Lateral, Oblique views taken: HW intact with stable ankle mortise

**Assessment**

- Fracture - Bimalleolar (closed) 824.4/S82.843A
- Ganglion - unspecified 727.43/M67.40
- RSD (reflex sympathetic dystrophy) 337.20/G90.50

**Plan**

**Orders**

- o X-RAY EXAM OF ANKLE - 3 Views-Left (73610-LT) - 824.4/S82.843A, 727.43/M67.40 - 01/07/2016
- o Post-Op Follow Up Visit (99024, 99024) - 824.4/S82.843A, 727.43/M67.40 - 01/07/2016

**Instructions**

- o Discussed with patient the condition and treatment options.

- o Recommend rest, ice, and elevation.
- o Ambulate, weight bearing as tolerated with PT help. desensitize the patient and eval for RSD and she is to go to pysiotherapy
- o X-rays reviewed with patient
- o Patient seen and examined today in the office.
- o Discussed with patient post operative progress.
- o Contact office with any questions or concerns.
- o Follow up 4 weeks.

**Disposition**

- o Return Visit Request in/on 4 weeks +/- 2 days (38941).

**Electronically Signed by:** BRYAN RUSSELL, DPM -Author on January 7, 2016 02:14:09 PM

## Progress Note

<b>Patient Name:</b>	Christine Perron	<b>Visit Date:</b>	January 28, 2016
<b>Patient ID:</b>	1113276	<b>Provider:</b>	BRYAN RUSSELL, DPM
<b>Sex:</b>	Female	<b>Location:</b>	Douglasville Village Podiatry
<b>Birthdate:</b>	January 30, 1961	<b>Location Address:</b>	6084 Professional Pkwy Ste B Douglasville, GA 301345613
<b>Primary Care Provider:</b>	Michael Miles MD	<b>Location Phone:</b>	6788384443
<b>Referring Provider:</b>	Michael Miles MD		

### Chief Complaint

- Post operative follow up

### History Of Present Illness

The patient is a 54 year old Caucasian/White female who presents for a post-op visit The injury occurred on 11/02/2015.

#### **Mechanism of Injury:**

The patient was fixing a water leak on her roof and fell. and turned the ankle. She reports experiencing immediate pain, swelling after several minutes, discoloration, weakness, and feeling the ankle "pop". The discomfort is currently moderate to severe in intensity and has an aching, a throbbing, and sharp quality. It radiates into the toes. The weakness is moderate involves dorsiflexion, plantar flexion, inversion, and eversion. She denies any additional injury.

#### **Recent Care:**

She was seen in the Emergency Room immediately following the injury. Evaluation at that time revealed a fracture. The patient was immobilized in a splint and prescribed pain medication and self referred to this office.

The patient returns for a post-operative visit after undergoing ORIF ankle and cyst removal left. eleven weeks ago.

She reports no nausea, vomiting, fever, chills

She is recovering at home and is partial weight bearing with crutches.

She had surgery for a bi-malleolar fracture on November 9th. she does have some hypersensitivity to the ankle and has not had enough PT visits and continues to walk with her crutches with an antalgic gait

### Review of Systems

#### **Constitutional**

- o **Denies** : Fatigue, Malaise, Weight Loss, Fever, Body Aches, Chills, Night Sweats, Loss of Appetite

#### **Eyes**

- o **Denies** : Discharge from Eye, Double Vision, Floaters, Eye Discomfort/Pain, Impaired Vision, Foreign Body Sensation, Blurred Vision, Changes in Vision

#### **HENT**

- o **Denies** : Headaches, Nasal Discharge, Recent Head Injury, Sore Throat, Nose Bleeding, Dental or Gum Disease, Lightheadedness, Neck Stiffness, Nasal Congestion, Thyroid Mass, Dentures, Dizziness, Neck Pain, Sinus Pain, Hoarseness

#### **Cardiovascular**

- o **Denies** : chest pain with exertion, palpitations, cardiac arrest, pacemaker/defibrillator, varicosities, lower extremity edema, claudication

#### **Respiratory**

- o **Denies** : Shortness of Breath, Pain with Breathing, Painful Cough, Productive Cough, Difficulty Breathing, Coughing up Blood, Wheezing

#### **Gastrointestinal**

- o **Denies** : Nausea, Constipation, Blood in Stools, Abdominal Pain, Vomiting, Gallstones, Heartburn, Black Stools, Diarrhea, Loss of Appetite, Jaundice, Eating Disorder

#### **Genitourinary**

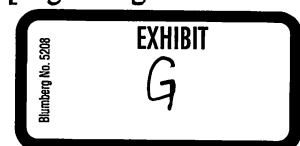
- o **Denies** : Urinary Frequency, Possible Pregnancy, Painful/Difficulty Urinating, Blood in Urine, Kidney Stones, Pelvic Pain

#### **Integument**

- o **Denies** : Rash, Dry Skin, Acne, Itching, Change/Loss Hair Growth, Skin/Mole Changes in Pigmentation, Discolored, Thickened, or Damaged Nails, Blisters, Ingrown Nail

#### **Neurologic**

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- o **Denies** : Muscle Weakness, Loss of Muscle Control, Loss of Coordination, Loss of Balance, Numbness, Tingling, Tremors, Seizures, Dizziness, Paralysis, Difficulty with Speech, Loss of Consciousness, Loss of Sensation, Memory Loss/Confusion

**Musculoskeletal**

- o **Denies** : Muscle Weakness, Joint Stiffness, Joint Swelling, Muscle Cramps, Limitation of Motion, Leg Swelling, Instability, Ankle Weakness and/or Leg Pain, Foot Pain, Ankle Pain, Knee Pain, Leg Pain, Hip Pain, Joint Pain/Other

**Endocrine**

- o **Denies** : heat intolerance, cold intolerance, Loss of Hair, Weight Gain/Loss

**Psychiatric**

- o **Denies** : anxiety, depression, Bi-polar, difficulty sleeping, Hallucinations

**Heme-Lymph**

- o **Denies** : easy bleeding, easy bruising, Enlarged Lymph Nodes

**Vitals**

Date	Time	BP	Position	Site	L\R	Cuff Size	HR	RR	TEMP(F)	WT	HT	BMI		O2 Sat	HC
												kg/m <sup>2</sup>	BSA m <sup>2</sup>		
11/03/2015	01:50 PM									170lbs 0oz	5' 5"	28.29	1.88		
11/18/2015	02:22 PM									170lbs 0oz	5' 5"	28.29	1.88		
12/08/2015	02:00 PM									170lbs 0oz	5' 5"	28.29	1.88		
01/07/2016	01:57 PM									170lbs 0oz	5' 5"	28.29	1.88		

**Physical Examination**

**Left Lower Extremity**

- o **Lower Leg** : pain to the distal lateral ankle with the fibula. No observable knee deformity or malalignment. No palpable defects. No masses present.
- o **Ankle** :
  - **Inspection/Palpation** : incision intact with moderate pain to the lateral ankle, but hypersensitivity to the distal ankle. decreased ROM of the ankle , no hyperhidrosis, subjective complaints of mottling but no clinical signs, no increased hair growth at this time
  - **Range of Motion** : deferred
  - **Stability** : stable mortise
  - **Strength** : deferred
- o **Foot** : Rectus foot type. incision intact
- o **Skin** : Skin texture, turgor and color are intact with edema noted
- o **Sensation** : Protective sensations are intact, equal and symmetrical.
- o **Reflexes** : deferred
- o **Vascular Exam** : Dorsalis pedis artery pulse palpable at 2/4. Posterior tibial artery pulse palpable at 2/4.

**----- Radiology Results -----**

- o **Left Ankle X-Ray** : AP, Lateral, Oblique views taken: HW intact with stable ankle mortise

**Assessment**

- Fracture - Bimalleolar (closed) 824.4/S82.843A
- Ganglion - unspecified 727.43/M67.40
- RSD (reflex sympathetic dystrophy) 337.20/G90.50

**Plan**

**Orders**

- o X-RAY EXAM OF ANKLE - 3 Views-Left (73610-LT) - 824.4/S82.843A, 727.43/M67.40 - 02/08/2016
- o Post-Op Follow Up Visit (99024, 99024, 99024) - 824.4/S82.843A, 727.43/M67.40 - 02/08/2016

**Instructions**

- o Discussed with patient the condition and treatment options.
- o Recommend rest, ice, and elevation.
- o Ambulate, weight bearing as tolerated with PT help. desensitize the patient and eval for RSD and she is to go to

pysiotherapy

- o X-rays reviewed with patient
- o Patient seen and examined today in the office.
- o Discussed with patient post operative progress.
- o Contact office with any questions or concerns.
- o Follow up 2 weeks and she will get a patch test to eval for a metal allergy

**Disposition**

- o Return Visit Request in/on 2 weeks +/- 2 days (41114).

**Electronically Signed by:** BRYAN RUSSELL, DPM -Author on February 8, 2016 06:17:26 AM

# Progress Note

<b>Patient Name:</b>	Christine Perron	<b>Visit Date:</b>	February 4, 2016
<b>Patient ID:</b>	1113276	<b>Provider:</b>	BRYAN RUSSELL, DPM
<b>Sex:</b>	Female	<b>Location:</b>	Douglasville Village Podiatry
<b>Birthdate:</b>	January 30, 1961	<b>Location Address:</b>	6084 Professional Pkwy Ste B Douglasville, GA 301345613
<b>Primary Care Provider:</b>	Michael Miles MD	<b>Location Phone:</b>	6788384443
<b>Referring Provider:</b>	Michael Miles MD		

## Chief Complaint

- Post operative follow up

## History Of Present Illness

The patient is a 55 year old Caucasian/White female who presents for a post-op visit The injury occurred on 11/02/2015.

### **Mechanism of Injury:**

The patient was fixing a water leak on her roof and fell. and turned the ankle. She reports experiencing immediate pain, swelling after several minutes, discoloration, weakness, and feeling the ankle "pop". The discomfort is currently moderate to severe in intensity and has an aching, a throbbing, and sharp quality. It radiates into the toes. The weakness is moderate involves dorsiflexion, plantar flexion, inversion, and eversion. She denies any additional injury.

### **Recent Care:**

She was seen in the Emergency Room immediately following the injury. Evaluation at that time revealed a fracture. The patient was immobilized in a splint and prescribed pain medication and self referred to this office.

The patient returns for a post-operative visit after undergoing ORIF ankle and cyst removal left. 3 months ago.

She reports no nausea, vomiting, fever, chills

She is recovering at home and is partial weight bearing with crutches.

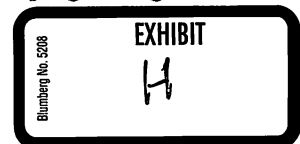
She states this morning she got up and felt a pop in the ankle. She went on to physical therapy and did icing that made it feel a little better.

## Past Medical History

<b>Disease Name</b>	<b>Date Onset</b>	<b>Notes</b>
Acid Reflux/GERD	--	--
Arthralgia of left ankle	10/01/2015	--
Bursitis	--	--
Cataract	--	--
Fracture - Ankle	--	--
Fracture - Bimalleolar (closed)	01/07/2016	--
Ganglion - unspecified	01/07/2016	--
Heart Murmur	--	--
Hiatal Hernia	--	--
Hypo (low) thyroid	--	--
Joint Instability	--	--
Joint Stiffness	--	--
Low Blood Pressure	--	--
Muscle Spasms	--	--
Peroneal tendinitis, left	10/01/2015	--
Plantar Fasciitis	--	--
Rheumatoid Arthritis	--	--
RSD (reflex sympathetic dystrophy)	01/07/2016	--
Spider Veins	--	--
Sprain of left ankle, unspecified ligament, sequela	10/01/2015	--
Unequal Leg Lenth	--	--
Varicose Veins	--	--

## Past Surgical History

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Procedure Name	Date	Notes
*Other Surgery	--	Heart Cath

**Medication List**

Name	Date Started	Instructions
cyclobenzaprine 7.5 mg oral tablet	12/08/2015	take 1 tablet (7.5 mg) by oral route 3 times per day for 14 days
Duexis 800-26.6 mg oral tablet		take 1 tablet by oral route 3 times per day
Percocet 5-325 mg oral tablet	12/08/2015	take 1 - 2 tablets by oral route every 4-6 hours as needed for 14 days
tramadol 50 mg oral tablet	11/24/2015	take 1 tablet (50 mg) by oral route every 6 hours as needed for 28 days

**Allergy List**

Allergen Name	Date	Reaction	Notes
naproxen	--	--	--
Other	--	--	fruit
seasonal allergies	--	--	--

**Family Medical History**

Disease Name	Relative/Age	Notes
Family History of Heart Disease	/	--
Family History of Arthritis	Mother/ /	--
Family History of Cancer	Mother/ /	--

**Social History**

Finding	Status	Start/Stop	Quantity	Notes
Alcohol	Light	--/--	--	--
Single	--	--/--	--	--
Tobacco	Former	--/--	--	--

**Review of Systems**

**Constitutional**

- o Denies : Fatigue, Malaise, Weight Loss, Fever, Body Aches, Chills, Night Sweats, Loss of Appetite

**Eyes**

- o Denies : Discharge from Eye, Double Vision, Floaters, Eye Discomfort/Pain, Impaired Vision, Foreign Body Sensation, Blurred Vision, Changes in Vision

**HENT**

- o Denies : Headaches, Nasal Discharge, Recent Head Injury, Sore Throat, Nose Bleeding, Dental or Gum Disease, Lightheadedness, Neck Stiffness, Nasal Congestion, Thyroid Mass, Dentures, Dizziness, Neck Pain, Sinus Pain, Hoarseness

**Cardiovascular**

- o Denies : chest pain with exertion, palpitations, cardiac arrest, pacemaker/defibrillator, varicosities, lower extremity edema, claudication

**Respiratory**

- o Denies : Shortness of Breath, Pain with Breathing, Painful Cough, Productive Cough, Difficulty Breathing, Coughing up Blood, Wheezing

**Gastrointestinal**

- o Denies : Nausea, Constipation, Blood in Stools, Abdominal Pain, Vomiting, Gallstones, Heartburn, Black Stools, Diarrhea, Loss of Appetite, Jaundice, Eating Disorder

**Genitourinary**



- o **Denies** : Urinary Frequency, Possible Pregnancy, Painful/Difficulty Urinating, Blood in Urine, Kidney Stones, Pelvic Pain
- Integument**
- o **Denies** : Rash, Dry Skin, Acne, Itching, Change/Loss Hair Growth, Skin/Mole Changes in Pigmentation, Discolored, Thickened, or Damaged Nails, Blisters, Ingrown Nail
- Neurologic**
- o **Denies** : Muscle Weakness, Loss of Muscle Control, Loss of Coordination, Loss of Balance, Numbness, Tingling, Tremors, Seizures, Dizziness, Paralysis, Difficulty with Speech, Loss of Consciousness, Loss of Sensation, Memory Loss/Confusion
- Musculoskeletal**
- o **Denies** : Muscle Weakness, Joint Stiffness, Joint Swelling, Muscle Cramps, Limitation of Motion, Leg Swelling, Instability, Ankle Weakness and/or Leg Pain, Foot Pain, Ankle Pain, Knee Pain, Leg Pain, Hip Pain, Joint Pain/Other
- Endocrine**
- o **Denies** : heat intolerance, cold intolerance, Loss of Hair, Weight Gain/Loss
- Psychiatric**
- o **Denies** : anxiety, depression, Bi-polar, difficulty sleeping, Hallucinations
- Heme-Lymph**
- o **Denies** : easy bleeding, easy bruising, Enlarged Lymph Nodes

**Vitals**

Date	Time	BP	Position	Site	L\R	Cuff Size	HR	RR	TEMP(F)	WT	HT	BMI	
												kg/m <sup>2</sup>	BSA m <sup>2</sup> O2 Sat HC
11/03/2015	01:50 PM									170lbs 0oz	5' 5"	28.29	1.88
11/18/2015	02:22 PM									170lbs 0oz	5' 5"	28.29	1.88
12/08/2015	02:00 PM									170lbs 0oz	5' 5"	28.29	1.88
01/07/2016	01:57 PM									170lbs 0oz	5' 5"	28.29	1.88
02/04/2016	01:41 PM	132/74	Sitting							170lbs 0oz	5' 5"	28.29	1.88

**Physical Examination**

**Left Lower Extremity**

- o **Lower Leg** : pain to the distal lateral ankle with the fibula. No observable knee deformity or malalignment. No palpable defects. No masses present.
- o **Ankle** :
  - **Inspection/Palpation** : incision intact with moderate pain to the lateral ankle, but hypersensitivity to the distal ankle. improved ROM of the ankle , no hyperhidrosis, subjective complaints of mottling but no clinical signs, no increased hair growth at this time. patient describing pain to the peroneal tendons with appearance of a scar tissue release around the tendons
  - **Range of Motion** : deferred
  - **Stability** : stable mortise
  - **Strength** : deferred
- o **Foot** : Rectus foot type. incision intact
- o **Skin** : Skin texture, turgor and color are intact with edema noted
- o **Sensation** : Protective sensations are intact, equal and symmetrical.
- o **Reflexes** : deferred
- o **Vascular Exam** : Dorsalis pedis artery pulse palpable at 2/4. Posterior tibial artery pulse palpable at 2/4.
- **Radiology Results** -----
- o **Left Ankle X-Ray** : AP, Lateral, Oblique views taken: HW intact with stable ankle mortise

**Assessment**

- Fracture - Bimalleolar (closed) 824.4/S82.843A
- Ganglion - unspecified 727.43/M67.40
- RSD (reflex sympathetic dystrophy) 337.20/G90.50

**Plan**

**Orders**

- o X-RAY EXAM OF ANKLE - 3 Views-Left (73610-LT) - 824.4/S82.843A, 727.43/M67.40 - 02/04/2016
- o Post-Op Follow Up Visit (99024, 99024, 99024) - 824.4/S82.843A, 727.43/M67.40 - 02/04/2016

**Instructions**

- o Discussed with patient the condition and treatment options.
- o Recommend rest, ice, and elevation.
- o Ambulate, weight bearing as tolerated with PT help. desensitize the patient and eval for RSD and she is to go to pysicaltherapy
- o X-rays reviewed with patient
- o CT Ordered on effected extremity and follow up in 1 week and ok to use the camwalker for 1-2 days
- o Patient seen and examined today in the office.
- o Discussed with patient post operative progress.
- o Contact office with any questions or concerns.

**Disposition**

- o Return Visit Request in/on 1 week +/- 2 days (40856).

**Electronically Signed by:** BRYAN RUSSELL, DPM -Author on February 4, 2016 02:24:12 PM

## Progress Note

<b>Patient Name:</b>	Christine Perron	<b>Visit Date:</b>	February 9, 2016
<b>Patient ID:</b>	1113276	<b>Provider:</b>	BRYAN RUSSELL, DPM
<b>Sex:</b>	Female	<b>Location:</b>	Douglasville Village Podiatry
<b>Birthdate:</b>	January 30, 1961	<b>Location Address:</b>	6084 Professional Pkwy Ste B Douglasville, GA 301345613
<b>Primary Care Provider:</b>	Michael Miles MD	<b>Location Phone:</b>	6788384443
<b>Referring Provider:</b>	Michael Miles MD		

### Chief Complaint

- Post operative follow up

### History Of Present Illness

The patient is a 55 year old Caucasian/White female who presents for a post-op visit The injury occurred on 11/02/2015.

#### **Mechanism of Injury:**

#### **Recent Care:**

The patient returns for a post-operative visit after undergoing ORIF ankle and cyst removal left. 3 months ago.

She reports no nausea, vomiting, fever, chills

She is recovering at home and is partial weight bearing with crutches.

Patient is here today to go over her CT results.

### Past Medical History

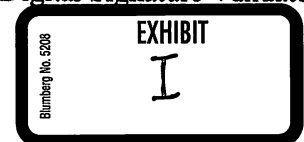
Disease Name	Date Onset	Notes
Acid Reflux/GERD	--	--
Arthralgia of left ankle	10/01/2015	--
Bursitis	--	--
Cataract	--	--
Fracture - Ankle	--	--
Fracture - Bimalleolar (closed)	01/07/2016	--
Ganglion - unspecified	01/07/2016	--
Heart Murmur	--	--
Hiatal Hernia	--	--
Hypo (low) thyroid	--	--
Joint Instability	--	--
Joint Stiffness	--	--
Low Blood Pressure	--	--
Muscle Spasms	--	--
Peroneal tendinitis, left	10/01/2015	--
Plantar Fascitis	--	--
Rheumatoid Arthritis	--	--
RSD (reflex sympathetic dystrophy)	01/07/2016	--
Spider Veins	--	--
Sprain of left ankle, unspecified ligament, sequela	10/01/2015	--
Unequal Leg Length	--	--
Varicose Veins	--	--

### Past Surgical History

Procedure Name	Date	Notes
*Other Surgery	--	Heart Cath

### Medication List

[Digital Signature Validated]



Name	Date Started	Instructions
cyclobenzaprine 7.5 mg oral tablet	12/08/2015	take 1 tablet (7.5 mg) by oral route 3 times per day for 14 days
Duexis 800-26.6 mg oral tablet		take 1 tablet by oral route 3 times per day
Percocet 5-325 mg oral tablet	12/08/2015	take 1 - 2 tablets by oral route every 4-6 hours as needed for 14 days
tramadol 50 mg oral tablet	11/24/2015	take 1 tablet (50 mg) by oral route every 6 hours as needed for 28 days

**Allergy List**

Allergen Name	Date	Reaction	Notes
naproxen	--	--	--
Other	--	--	fruit
seasonal allergies	--	--	--

**Family Medical History**

Disease Name	Relative/Age	Notes
Family History of Heart Disease	/	--
Family History of Arthritis	/	--
Family History of Cancer	/	--
	Mother/	
	Mother/	
	Mother/	

**Social History**

Finding	Status	Start/Stop	Quantity	Notes
Alcohol	Light	--/--	--	--
Single	--	--/--	--	--
Tobacco	Former	--/--	--	--

**Review of Systems**

**Constitutional**

- o Denies : Fatigue, Malaise, Weight Loss, Fever, Body Aches, Chills, Night Sweats, Loss of Appetite

**Eyes**

- o Denies : Discharge from Eye, Double Vision, Floaters, Eye Discomfort/Pain, Impaired Vision, Foreign Body Sensation, Blurred Vision, Changes in Vision

**HENT**

- o Denies : Headaches, Nasal Discharge, Recent Head Injury, Sore Throat, Nose Bleeding, Dental or Gum Disease, Lightheadedness, Neck Stiffness, Nasal Congestion, Thyroid Mass, Dentures, Dizziness, Neck Pain, Sinus Pain, Hoarseness

**Cardiovascular**

- o Denies : chest pain with exertion, palpitations, cardiac arrest, pacemaker/defibrillator, varicosities, lower extremity edema, claudication

**Respiratory**

- o Denies : Shortness of Breath, Pain with Breathing, Painful Cough, Productive Cough, Difficulty Breathing, Coughing up Blood, Wheezing

**Gastrointestinal**

- o Denies : Nausea, Constipation, Blood in Stools, Abdominal Pain, Vomiting, Gallstones, Heartburn, Black Stools, Diarrhea, Loss of Appetite, Jaundice, Eating Disorder

**Genitourinary**

- o Denies : Urinary Frequency, Possible Pregnancy, Painful/Difficulty Urinating, Blood in Urine, Kidney Stones, Pelvic Pain

**Integument**

- o Denies : Rash, Dry Skin, Acne, Itching, Change/Loss Hair Growth, Skin/Mole Changes in Pigmentation, Discolored, Thickened, or Damaged Nails, Blisters, Ingrown Nail

**Neurologic**

- o **Denies** : Muscle Weakness, Loss of Muscle Control, Loss of Coordination, Loss of Balance, Numbness, Tingling, Tremors, Seizures, Dizziness, Paralysis, Difficulty with Speech, Loss of Consciousness, Loss of Sensation, Memory Loss/Confusion

**Musculoskeletal**

- o **Denies** : Muscle Weakness, Joint Stiffness, Joint Swelling, Muscle Cramps, Limitation of Motion, Leg Swelling, Instability, Ankle Weakness and/or Leg Pain, Foot Pain, Ankle Pain, Knee Pain, Leg Pain, Hip Pain, Joint Pain/Other

**Endocrine**

- o **Denies** : heat intolerance, cold intolerance, Loss of Hair, Weight Gain/Loss

**Psychiatric**

- o **Denies** : anxiety, depression, Bi-polar, difficulty sleeping, Hallucinations

**Heme-Lymph**

- o **Denies** : easy bleeding, easy bruising, Enlarged Lymph Nodes

**Vitals**

Date	Time	BP	Position	Site	L\R	Cuff Size	HR	RR	TEMP(F)	WT	HT	BMI	
												kg/m <sup>2</sup>	BSA m <sup>2</sup> O2 Sat HC
11/03/2015	01:50 PM									170lbs 0oz	5' 5"	28.29	1.88
11/18/2015	02:22 PM									170lbs 0oz	5' 5"	28.29	1.88
12/08/2015	02:00 PM									170lbs 0oz	5' 5"	28.29	1.88
01/07/2016	01:57 PM									170lbs 0oz	5' 5"	28.29	1.88
02/04/2016	01:41 PM	132/74	Sitting							170lbs 0oz	5' 5"	28.29	1.88
02/09/2016	11:16 AM									170lbs 0oz	5' 5"	28.29	1.88

**Physical Examination**

**Left Lower Extremity**

- o **Lower Leg** : pain to the distal lateral ankle with the fibula. No observable knee deformity or malalignment. No palpable defects. No masses present.
- o **Ankle** :
  - **Inspection/Palpation** : incision intact with moderate pain to the lateral ankle, but hypersensitivity to the distal ankle. improved ROM of the ankle , no hyperhidrosis, subjective complaints of mottling but no clinical signs, no increased hair growth at this time. patient describing pain to the peroneal tendons with appearance of a scar tissue release around the tendons. she has swelling to the distal sinus tarsi. lateral dorsal cutaneous nerve with hypersensitivity but improved feeling to the toes
  - **Range of Motion** : guarded with improved walking with the cam walker and the use of the crutch
  - **Stability** : stable mortise
  - **Strength** : 4+/5 with all motion but guarded due to pain
- o **Foot** : Rectus foot type. incision intact
- o **Skin** : Skin texture, turgor and color are intact with edema noted
- o **Sensation** : Protective sensations are intact, equal and symmetrical.
- o **Reflexes** : deferred
- o **Vascular Exam** : Dorsalis pedis artery pulse palpable at 2/4. Posterior tibial artery pulse palpable at 2/4.

**----- Radiology Results -----**

- o **Left Ankle X-Ray** : AP, Lateral, Oblique views taken: HW intact with stable ankle mortise

CT shows intervals of healing to the fibula with with no loose bodies in the ankle and no hardware failure

**Assessment**

- Fracture - Bimalleolar (closed) 824.4/S82.843A
- Ganglion - unspecified 727.43/M67.40
- RSD (reflex sympathetic dystrophy) 337.20/G90.50

**Plan**

**Orders**

- o Moderate level established patient office visit (99213, 99213, 99213, 99213) - 824.4/S82.843A - 02/09/2016

**Instructions**

- o Discussed with patient the condition and treatment options.
- o Recommend rest, ice, and elevation.
- o Ambulate, weight bearing as tolerated with PT help. desensitize the patient and she is to go to physiotherapy. patient to wean off of the crutch and then out of the cam walker. follow up in 4 weeks
- o CT scan reviewed with patient
- o Patient seen and examined today in the office.
- o Discussed with patient post operative progress.
- o Contact office with any questions or concerns.
- o as the patient is improving with her sensation of her toes I want to give her more time and more therapy to try and improve her RSD and her hypersensitivity with the lateral dorsal cutaneous nerve. she understands that we can remove the hardware and implant her nerve in the fibula if she is recalcitrant to this treatment. follow up in 4 weeks
- o continue 4 hours standing walking and then the rest seated. lifting of 10 lbs and push and pull the same

**Disposition**

- o Return Visit Request in/on 4 weeks +/- 2 days (41353).

**Electronically Signed by:** BRYAN RUSSELL, DPM -Author on February 10, 2016 08:49:55 AM

**Resurgens Orthopaedics  
PO Box 720580  
Atlanta, GA 30358-2580  
(404) 847-9999**

Patient: Christine Perron  
DOB: 01/30/1961

EMRN:2554630  
Age: 56

Encounter Date: Feb 17 2016 1:30PM  
Provider:Erroll Bailey M.D.

**HPI:** Christine Perron is 55 years old. She works as a cake decorator. On 11/09/15 she fell off a roof and had a distal fibula fracture and underwent ORIF by a local physician. She has had stabbing, burning, numbness, and tingling pain thereafter. She says she has been told that she may have a plate allergy or that if they have to go back in they may have to do surgery on her nerve and bury it in bone. This is what she is telling me.

**PMH:** Otherwise unremarkable.

**ROS:** Otherwise unremarkable.

**PE:** Physical examination shows tenderness over the fibula plate. Positive Tinel there over the superficial peroneal nerve. Numbness in the foot along the distribution of the superficial peroneal nerve. Good pulses. Well nourished, well developed. Good ankle motion and good strength. No instability. Wounds are benign.

**IMAGING:** Three view x-rays of the ankle that she brings show the fibula plate, no interfragmentary screw and a CT scan that shows that the fracture is healing but still not completely healed.

**IMP:**

1. Healing fibula fracture.
2. Superficial peroneal nerve injury, hard to know if this was preoperatively or intraoperatively or something postoperatively.

**PLAN:** Nonetheless I think she should wait, give this time, and see what happens. Ultimately the nerve may have to be explored. If it is explored then it would be dealt with appropriately at that time.

DD: 2/17/2016 2:16:00 PM / DT: 2/19/2016 6:40 AM wz904tc Job#: 7183-3630303 / WS#: 3748639

Electronically signed by:Erroll Bailey M.D. Mar 16 2016 2:03PM EST



**Resurgens Orthopaedics  
PO Box 720580  
Atlanta, GA 30358-2580  
(404) 847-9999**

Patient: Christine Perron  
DOB: 01/30/1961

EMRN:2554630  
Age: 56

Encounter Date: May 23 2016 1:45PM  
Provider:Erroll Bailey M.D.

**HPI:** Christine Perron has a healed fibula fracture status post ORIF with a superficial peroneal nerve injury in that area. I last saw her a few months postop. I told her that it was best to give her time. The surgery was done elsewhere.

**PE:** Examination shows at the most proximal aspect of the fibular incision she has excruciating pain with numbness and tingling down in her foot when this is palpated. She has alert, oriented, and healthy. Well nourished, well developed in no acute distress.

**XR:** No new x-rays were taken.

She brings her old records which I did review.

**IMP:** I think she has got a superficial peroneal nerve injury. This may be a traction injury or it could actually be cut at the proximal end of the wound.

**PLAN:** After discussion with her of therapy and diagnostic injection, 80 mg of Depo-Medrol, 1 cc of lidocaine, and 1 cc of Marcaine was injected into that area. She got immediate relief of pain. We will see how this does. If this does not work she may come to exploration of the superficial peroneal nerve with excision of neuroma.

DD: 5/25/2016 8:16:00 AM / DT: 5/27/2016 9:59 AM wz904tc Job#: 7183-3759989 / WS#: 3878324

Electronically signed by:Erroll Bailey M.D. Jun 1 2016 4:11PM EST





**Resurgens Orthopaedics  
PO Box 720580  
Atlanta, GA 30358-2580  
(404) 847-9999**

Patient: Christine Perron  
DOB: 01/30/1961

EMRN:2554630  
Age: 56

Encounter Date: Jul 28 2016 8:30AM  
Provider:Erroll Bailey M.D.

**OPERATIVE REPORT**

**Surgical Clinic Number:**

**Physician:** Erroll J. Bailey, M.D.

**Assistant:** None.

**PREOPERATIVE DIAGNOSIS:** 1. Superficial peroneal nerve neuroma of leg.  
2. Retained painful hardware.

**POSTOPERATIVE DIAGNOSIS:** 1. Superficial peroneal nerve neuroma of leg.  
2. Retained painful hardware.

**PROCEDURE PERFORMED:** 1. Removal painful fibular hardware, left.  
2. Excision of superficial peroneal nerve neuroma and burying of nerve into bone, left.

**ANESTHESIA:** Popliteal block.

**MEDICATIONS:** Ancef 2 grams.

**SURGICAL PROCEDURE:** The patient was brought to the operating room and placed in the supine position. A thigh tourniquet was applied and a hip roll was placed to internally rotate the leg. The foot was prepped and draped in the normal sterile fashion up to the knee. The tourniquet was blown up after the foot was exsanguinated to 300 mmHg.

A longitudinal incision was made under fluoroscopy over the fibular incision and soft tissue dissection was carried down to the plate distally. I went proximally with the incision just above the plate to see if I could find the superficial peroneal nerve coming down. I identified it as it came down near the proximal end of the plate and it had been severed and it was freed up and moved out of the way. The ends of the neuroma were cut off. The plate was then identified proximally and all screws and the plate were removed. Copious irrigation was done.

Through one of the more proximal screw holes I enlarged the hole with a drill and put a running stitch in the distal aspect of the nerve which was a 0 Polydek. I pulled it through the fibular hole



Patient: Christine Perron  
Encounter: Jul 28 2016 8:30AM  
Provider: Erroll Bailey M.D.

EMRN: 2554630

that I had overdrilled and then brought one of the sutures around the fibula and tied it to itself, holding the nerve in place as it had been pulled into the fibular bone. It was not under any significant tension. Copious irrigation was done.

The deep tissues were closed with 0 Vicryl, the subcutaneous with 2-0 Vicryl, and the skin with regular staples. A sterile dressing with a posterior splint was applied. Needle and sponge counts were correct x2. The patient was sent to the recovery room in stable and satisfactory condition.

DD: 7/28/2016 10:21:00 AM / DT: 7/28/2016 2:48 PM wuz985nb Job#: 7183-3841730 / WS#: 3960076

Electronically signed by:Erroll Bailey M.D. Aug 5 2016 3:39PM EST

**Resurgens Orthopaedics**  
**PO Box 720580**  
**Atlanta, GA 30358-2580**  
**(404) 847-9999**

Patient: Christine Perron  
DOB: 01/30/1961

EMRN:2554630  
Age: 56

Encounter Date: Oct 24 2016 10:20AM  
Provider:Erroll Bailey M.D.

**HPI:** Christine Perron returns. This is starting to look like a complex regional pain syndrome situation to me. To recap, she had an ORIF of her fibula bone elsewhere, came to me, and I felt that the surgeon had cut her superficial peroneal nerve. We tried conservative measures to help that and it was unsuccessful. So, I went in removed the fibular plate which had some loose screws that were bothering her and I identified the superficial peroneal nerve in the calf at the edge of the plate and the nerve indeed had been severed. I took the nerve and then buried it into the fibula bone so that it was no longer an issue for her. This would leave her with numbness, but the pain should subside.

It simply has not. Her pain is still there. It is worse. It shoots up her leg. The therapist thinks it is sciatic. I do not. I think this is an early complex regional pain syndrome.

**PLAN:** I want her to see Dr. Anita Cone-Sullivan. I think she needs epidural injections and further evaluation for this problem.

DD: 10/24/2016 11:41:00 AM / DT: 10/26/2016 4:38 PM wz904tc Job#: 7183-3959181 / WS#: 4077526

Electronically signed by:Erroll Bailey M.D. Oct 28 2016 10:33AM EST

