# Gordon Irving

## M.B., B.S., M.Med., M.Sc., F.F.A.S.A.,

## Diplomate ABA, ABPM, CIME

## ABA. Certificate in Pain Management

**UNDERGRADUATE EDUCATION:**
M.B., B.S.: University of Newcastle-Upon-Tyne, England

**GRADUATE EDUCATION:**

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|---|---|
| 1978 | Fellow of Faculty of Anaesthetists (FFA). College of Medicine of South Africa |
| 1978 | Registered Practitioner in Underwater Medicine, Certification, South African Navy |
| 1983 | M. MSc. (Med) Sports Science, University of Cape Town, South Africa |
| 1990 | M.Med (Anaesthesia), College of Medicine of South Africa |
| 1993 | Diploma in Business Management, Damelin Management School, Cape Town |
| 1996 | Diplomate, American Board of Pain Medicine |
| 1997 | Certified Independent Medical Examiner (CIME$^{SM}$)<br>American Board of Independent Medical Examiners |
| 1997 | Diplomate, American Board of Anesthesiology |
| 1998 | American Board of Anesthesiology: Certificate in Pain Management |
| 2008 | American Board of Anesthesiology: Re-Certification in Pain Management |

**ACADEMIC APPOINTMENTS**:

| | |
|---|---|
| 1981-1983 | Lecturer (Physiology), University of Cape Town Medical School |
| 1983-1989 | Lecturer (Bioenergetics of Exercise Research Unit) University of Cape Town Medical School |
| 1989-93 | Lecturer (Anaesthesia), University of Cape Town Medical School |
| 1993-94 | Visiting Associate Professor, Department of Anesthesiology, The University of Texas-Houston Medical School, Houston, Texas |
| 1994-98 | Associate Professor, Department of Anesthesiology<br>University of Texas Medical School, Houston, Texas. |
| 1999-Present | Clinical Associate Professor, Dept of Anesthesiology, University of Washington School of Medicine. |

**HONORS AND AWARDS:**

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| 1981 | Certificate of Appreciation from Bermuda Hospital Board for work performed in setting up the Bermuda Decompression Chamber Facility |
| 1982 | The Duncan Baxter Scholarship - for Postgraduate studies in Medicine<br>The Nellie Atkinson Request Research Grant for Medical Research by a Postgraduate doctor<br>The Frank Forman Scholarship - for Postgraduate Medical Research<br>The Smith and Nephew Sports Science Scholarship - for Research in the field of Sports Science. |
| 1986 | The Medical Research Council of South Africa Fellowship in Sports Science (the first awarded in South Africa) for Postgraduate Research in the field of Sports Science |
| 1990 | Crest Health Care Prize - for best Research Presentation: Annual South African Society of Anaesthetists Congress, Durban. Paper entitled "A Survey of Blood Component Therapy amongst South African Anaesthetists. |
| 1990 | Crest Health Care Registrar's Prize: Best Congress Presentation, South African Society of Anaesthetists Congress, Durban. Paper entitled "The Pneumatic Tourniquet and the Anaesthetist.<br>Jack Abelsohn Prize for the most meritorious article published by a Postgraduate student in Anaesthesia: "Perioperative blood and blood component therapy: A guide for Anaesthetists and Surgeons." |
| 1993 | Boots Pharmaceuticals Prize for Best Scientific Poster Presentation: A Comparison of Caudal Morphine Given Pre or Post-Operation for Pain Control in Paediatric Surgery: South African Society of Anaesthetists Jubilee Congress, Cape Town. |

2002, 2004, 2005, 2006, 2007. Seattle Magazine "best doctors" pain management
2006, 2007, 2008 Seattle Metropolitan magazine "best specialists" pain.
2006, 2007, 2008 Guide to America's Top Anesthesiologists

2006, 2007, 2008 Guide to America's Top Physicians
2007 Spring/summer Puget Sound Consumers' Checkbook Magazine "best doctors"
2008 Washington Travel and Life Magazine: Annual Best doctors
2007-2008 Best Doctors in America

**EDITORIAL POSITIONS (Ad Hoc):**

Reviewer for the South African Medical Journal, 1991-1993:

Critical Care Medicine: Sub-reviewer for Pain Management.

The Clinical Journal of Pain: Book and Article Reviewer,

Acta Analgesia Scandinavica

CNS Spectrums reviewer

Pain Digest: Book Reviewer

Editor Four monographs on neuropathic pain Dannemiller 2003-4

Moderator: CNS Spectrums Novel Pharmacologic Options in the Treatment of Neuropathic Pain 2005

Moderator Pathways DPNP and Neuropathic pain 2006

**BIBLIOGRAPHY**

## A. Posters

1. The pneumatic tourniquet and its hazards. Fifth International Sports Science and Recreation Conference, Durban, South Africa, 1984.
2. The athlete and the pneumatic tourniquet. First International Sports Medicine Congress, 1985.
3. Fitness in the work place. Second International Ergonomics Congress, Cape Town, 1986.
4. Beware the limping athlete. Third International Sports Medicine Congress, Cape Town, 1989.
5. The pneumatic tourniquet and the anaesthetist. Annual SA Society of Anaesthetists Meeting, 1990.
6. Survey of blood component therapy amongst South African Anaesthetists. Annual South African Society of Anaesthetists Meeting, Durban, 1990.
7. A new concept for spinal relief in theatre staff. SA Society of Anaesthetists Meeting, Pretoria, 1992.
8. A Pain Assessment Centre and Exercise Rehabilitation Unit in Cape Town. Pain Society of South Africa Annual Meeting, Pretoria, 1992.
9. Monitoring perioperative analgesia in children. South African Society Anaesthetists Mtg, Johannesburg, 1992.
10. Anaesthesia and analgesia for children undergoing burn procedures. South African Society of Anaesthetists Meeting, Johannesburg, 1992.
11. A comparison of caudal morphine given pre- or post-surgery in children. South African Society of Anaesthetists Jubilee Meeting, Cape Town, 1993.
12. Conditions that justify confirmatory analysis: Do theories of chronic pain meet the criteria? 8th World Congress on Pain, Vancouver, B.C., Canada, August 21, 1996.
13. Correlates of Waddell signs among patients with back pain. Proceedings from the American Pain Society Annual meeting. Washington DC, November, 1996.
14. Algorithm for chronic pain management: Orlando Dec 1999, Beijing China May 2000, San Francisco July 2000.
15. A randomized, double blind, placebo-controlled trial to investigate the safety and efficacy of SPM927 in painful diabetic neuropathy. 6th International Conf on Mechanisms and treatment of neuropathic pain. San Diego 2003
16. A multi-center open-label study to evaluate the efficacy of Lenalidomide in the treatment of type-1 complex regional pain syndrome-functional assessment results. 7th International Conf on Mechanisms and treatment of neuropathic pain. Bermuda 2004.
17. A Multi-center, open-label 12-week study with extension to evaluate the safety and efficacy of Lenalidomide in the treatment of complex regional pain syndrome type 1. IASP World Congress Sydney Australia Aug 2005
18. Thalidomide and it's efficacy in interstitial cystitis, an open label study. IASP World Congress Sydney Australia Aug 2005
19. Gastrointestinal adverse events associated with long term opioid analgesic therapy in a large persistent non-cancer pain population. American Pain Society meeting San Antonio May 2006
20. Gastrointestinal adverse events associated with long term opioid analgesic therapy in a large persistent non-

cancer pain population: baseline data European Pain Society meeting Istanbul Sept 2006

21. Results of extended release gabapentin in treating the pain of PHN. 9th International Conf on Mechanisms and treatment of neuropathic pain. Bermuda 2006.
22. A Single Localized One-Hour Application of NGX-4010 Significantly Reduced Pain for up to 12 Weeks: Results of a Confirmatory, Randomized, Double-Blind, 12-Week, Controlled Phase III Study in Postherpetic Neuralgia Patients. American Academy of Pain Medicine annual Meeting Feb 2008
23. A Multicenter, Randomized, Double-Blind, Controlled Study of NGX-4010, a High-Concentration Capsaicin Patch, for the Treatment of Postherpetic Neuralgia. IASP meeting Glasgow Aug 2008
24. Development of a Registry for the Study of Opioid Utilization in Chronic Noncancer Pain Management. Pain Week Las Vegas Sept 2008
25. The Pain champion Project: Evaluation of a 12 week interactive learning program to improve family medicine care of chronic pain patients. APS annual meeting San Diego May 2009
26. Measures of depression, anxiety, and positive outlook in patients with chronic non cancer pain: data from the Opioid Utilization Study (OPUS). APS annual meeting San Diego May 2009
27. Physical and emotional function in patients on opioid therapy for chronic non-cancer pain: : data from the Opioid Utilization Study (OPUS). APS annual meeting San Diego May 2009
28. Workplace and non workplace productivity in chronic non-cancer pain patients: data from the Opioid Utilization Study (OPUS). APS annual meeting San Diego May 2009
29. Baseline demographic data from OPUS: the opioid utilization study in chronic non cancer pain. APS annual meeting San Diego May 2009
30. Chronic non-cancer pain severity and interference with daily life: data from the Opioid Utilization Study (OPUS).APS annual meeting San Diego May 2009.
31. Impact of chronic non-cancer pain on utilization o pain medications and healthcare resources: data from the Opioid Utilization Study (OPUS). APS annual meeting San Diego May 2009
32. The design of OPUS: the opioid utilization study in chronic non cancer pain. APS annual meeting San Diego May 2009
33. NGX-4010, a high-concentration capsaicin patch administered alone or with systemic neuropathic medications, reduces pain in patients with post herpetic neuralgia: APS annual meeting San Diego May 2009

## B. Refereed Original Articles

1. **Irving GA,** Noakes TD: The protective role of local hypothermia in tourniquet-induced ischaemia of muscle. J Bone Joint Surg (Brit) 67-B:297-301, 1985.
2. **Irving GA**: Inaccurate tourniquet pressure-gauge readings - A widespread problem. S Afr Med J:265-266, 1986.
3. Irving RA, Noakes TD, Day RS, **Irving GA**, Van Zyl Smit R: The immediate and delayed effects of marathon running on renal function. J Urology 6(B):1176-1180, 1986.
4. Koeslag J, **Irving GA**: Adrenergic blockade restores glucose's antiketogenic activity after exercise in carbohydrate depleted athletes. J Physiol 386:439-454, 1987.
5. **Irving GA**: The rationale and use of anti-inflammatories and pain killers in the rehabilitation of sports injuries. S A Fam Prac 10(6):277-281, 1989.
6. **Irving GA**: Deep vein thrombosis in runners: Beware the limping athlete. S A Fam Prac 79:183-185, 1991.
7. **Irving GA**: Survey of the use of blood and blood components amongst South African anaesthetists working in teaching hospitals. S Afr Med J 82:324-328, 1992.
8. **Irving GA**, Butt AD, Van Der Veen B: A comparison of caudal morphine given pre- or post-surgery for postoperative analgesia in children. Paediatric Anaesthesia 3:217-221, 1993.
9. **Irving GA**, Butt AD: Anaesthesia for burns in Children: A review of procedures practiced at Red Cross War Memorial Children's Hospital. Burns 20:241-243, 1994.
10. Tay B, Wallace MS, **Irving G**. Quantitative assessment of differential sensory blockade after lumbar epidural lidocaine. Anesth Analg 84:1071-5, 1997.
11. Novy DM, Seifert-Collins H, Nelson DV, Thomas AG, Wiggins M, Martinez A, **Irving GA**. Waddell Signs: Distributional Properties and Correlates. Arch of Phys Med Rehabil. 79: 820-822 1998.
12. Raj PP, Chado HN, Angst M, Heavner J, **Irving G** et al: Painless Electrodiagnostic Current Perception Threshold and Pain Tolerance Threshold Values in CRPS Subjects and Healthy Controls: A Multicenter Study. Pain Practice 2001: 1: 53-60
13. Baron CG, **Irving GA**. Effects of tourniquet ischemia on current perception thresholds in healthy volunteers.

Pain Practice 2002;2:1-5

14. Fortner BV, Demarco G, **Irving G,** Ashley J, Keppler G, Chavez J, Munk J. Description and predictors of direct and indirect costs of pain reported to cancer patients. J Pain and Symptom Mgmt. 2003; 25:9-18.
15. Ersek M. Cherrier MM, Overman S, **Irving GA** The cognitive effects of opioids. Pain Management Nursing 2004;5 (2):75-93
16. **Irving GA** Contemporary assessment and management of neuropathic pain Neurology 2005 64;12: supp 3; S21-S27
17. Argoff CE, Cole E, Fishbain DA, **Irving GA.** Diabetic peripheral neuropathic pain. Mayo Clinic Proceedings Supplement 2006:81(4);S3-S11
18. Argoff CE, Backonja MM, Belgrade M, Bennet GJ, Clark MR, Cole E, Fishbain DA, **Irving GA**, McCarberg BH, McLean MJ Consensus Guidelines DPNP: Treatment Planning and Options. Mayo Clinic Proceedings Supplement 2006:81(4);S12-S25
19. Argoff CE, Backonja MM, Belgrade M, Bennet GJ, Clark MR, Cole E, Fishbain DA, **Irving GA**, McCarberg BH, McLean MJ Diabetic Peripheral Neuropathic Pain: Consensus guidelines for treatment. J Fam Pract 2006 Supp 3-19
20. **Irving G**, Jensen M, Cramer BS et al Efficacy and tolerability of gastric-retentive gabapentin for the treatment of post herpetic neuralgia: results of double-blind randomized placebo-controlled clinical trial. The Clinical Journal of Pain: 2009; 25 ( 3 ):185-192
21. Webster L, Jansen JJ, Peppin J, Lasko B, **Irving G**, Morlion B, Snido J, Pierce A, Mortensen E, Kleoudis E, Kleoudis C, Carter E. Alvimpan, a peripherally acting mu-opioid receptor (PAM-OR) for the treatment of opioid induced bowel dysfunction: Results from a double blind, placebo controlled , dose finding study in subjects taking opioids for chronic non-cancer pain. Pain 2008;137:428-440
22. Backonje MM, Walk D, Edwards RR, Sehgal N, Moeller-BertramT, Wasan A, Irving G, Argoff C, Wallace W. Quantitative Sensory Testing Neuropathic Pain Phenomena and Other Sensory Abnormalities. 2009 Clin J Pain;25:641-647
23. Walk D, Sehgal N, Moeller-Bertram T, Edwards RR, Wasan A, Wallace M, **Irving G**, Argoff C, BackonjaMM. Quantitative Sensory Testing and Mapping: A Review of Nonautomated Quantitative Methods for Examination of the Patient With Neuropathic Pain 2009 Clin J Pain;25:641-647

24 Argoff CE , Albrecht P, Irving G, Rice F. Multimodal analgesia for chronic pain: Rationale and future directions. Pain Medicine. 2009: 10 (S2) S53-S66

## Invited Articles (Reviews, Editorials, etc.) in Journals

1. **Irving GA**: Polycythaemia and the Anaesthetist. Editorial. S Afr Med J 80:418-419, 1991.
2. **Irving GA**: Peri-operative blood and blood component therapy. CME article. Can J Anaes, 39(10):1105-1115, 1992.
3. **Irving GA**: Pain management in children. CME article. S Afr Med J 11(3):472-475, 1993.
4. **Irving GA**: Treatment of chronic abdominal pain. CME article. S Afr Med J, May 1994.
5. **Irving GA**: New trends in opioid analgesics. Cur Anes Crit Care 8:62-67, 1997.
6. **Irving GA** (moderator), Goli V, Dunteman E, Novel Pharmacologic Options in the Treatment of Neuropathic Pain. An expert review of clinical challenges in Psychiatry and Neurology. CME accredited Roundtable Monograph. Nov 2004
7. **Irving GA**: Current and Emerging Therapies for Opioid-associated Gastrointestinal Side Effects: CME monograph Oct 2006

## D. Chapters

1. **Irving GA**, Werner D: The physical treatment of pain in the patient with hepatobiliary malignancy. Chapter 31, pp. 629-642. In: Hepatobiliary Malignancy: It's Multidisciplinary Management. Ed. J. Terblanche, Edward Arnold. London. 1994.
2. **Irving GA**, Shipton E, Allwood CW, Levin V: Perspectives of Cancer Pain Management in Southern Africa. In: Cancer Pain Management. Principles and Practice. Ed. W.C.V. Parris; Butterworth-Heinemann. 1996.
3. Wallace M, **Irving G**, Dunn J, Yaksh T: Nonsurgical management of chronic back pain. In: The Spine. W. B. Saunders. In press 1998.
4. **Irving G**: Acute pancreatitis: Pain management. In: Anesthesiology Clinics of North America. W.B. Saunders. 15, 2:319-334, 1997.
5. **Irving GA**: Principles of pain management. In: Ed. J. Katz, Anesthesiology: A Comprehensive Study Guide. New York, McGraw Hill, pp. 543-558, 1997.

8. **Irving GA**: Clinical hematology. In: Ed. J. Katz, Anesthesiology: A Comprehensive Study Guide. New York, McGraw Hill, pp. 529-541, 1997.
9. **Irving GA**: Transcutaneous Nerve Stimulation. In Just The Facts: Pain Medicine. Ed Wallace MS, Staats P. McGraw Hill 2004
10. Ersek, M. & **Irving G.A.** Nursing management of pain. (In) Lewis, S.M., Heitkemper, M.M., Dirksen, S.R., O'Brien, P., Giddens, J.,& Bucher, L. (Eds.) Medical-Surgical Nursing: Assessment and Management of Clinical Problems, 7th Edition. St. Louis: C.V. Mosby. 2005
11. Irving GA, Squire P Evaluation of the chronic pain patient: In Bonica Textbook of Pain Management Fourth edition: 2009

**E. Book**

**Irving GA**, Wallace M: Pain Management for The Practicing Physician. New York: Churchill Livingstone, 1996.

**F. Other Professional Communications**

1. **Irving GA**: Preoperative maximum haemoglobin values - Another look at anaesthetic practices. Letter. S Afr Med J 78:697-698, 1990.
2. **Irving GA**: A standing-sitting pelvic tilt chair. New hope for back weary surgeons. Letter. S Afr Med J 82:131-132, 1992.
3. **Irving GA**, Butt AD, Van Der Veen B: A comparison of two doses of caudal morphine with bupivacaine in children undergoing major, lower abdominal surgery. Letter. S Afr Med J 83:223-224, 1993.
4. **Irving GA**: Safety of non-steroidal anti-inflammatories before adenotonsillectomy. Letter. S Afr Med J 83:614-615, 1993.
6. Breznick D, Artmann S, **Irving G**. A simple system to prevent epidural catheter hub disconnections. Anesth- Analg 84:1167, 1997.

**WEB ENDURING MATERIALS**

Fall 2007: Clinical implications of opioid use in the hospital and palliative care settings. Academy for Healthcare education

Spring 2009: Current thinking in Trends in cancer pain management. A 17 talk series by various national speakers. Talk 16: **Irving GA**: Putting it all together 2: Optimal treatment of chronic pain. Series editor Burton A. Henry Stewart Talks UK

**Lay Press Regular Articles:**

1. Executive Health. Foresight Magazine 1985-1986.
2. Healthy Lifestyles and Sports Science Articles. Campus Sports 1984-1985.
3. Training for the Two Oceans. Weekly article for three months Argus Newspaper 1985.
4. Book Forward: For Karate SA, Timmins Publication, 1986.

**Booklet Published:**

1991 Blood component Therapy in the Peri-operative Period. A guide for anaesthetists and surgeons.

**Video Produced:**

Postoperative Pain Management. For Baxter Health Care, April 1994.

**Editor**

2004 1. Monographs in neuropathic pain: Dannemiller series
The Pain Patient Assessment of Neuropathic pain: M Backonja. Assoc Prof. University of Wisconsin-Madison
Postherpetic Neuralgia>: A model of Neuropathic Pain. S. Beydoun Professor University of Southern California,

2004 2. Monographs in neuropathic pain: Dannemiller series Trigeminal Neuralgia and Other Facial Neuralgias: Troels Staehelin Jensen . Professor, Department of Neurology and Danish Pain Research Center Aarhus University Hospital, Aarhus, Denmark

2004 3. Diabetic Peripheral Neuropathy: Roy Freeman,, Center for Autonomic and Peripheral Nerve Disorders, Department of Neurology, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, Massachusetts

2006 Pathways series Diabetic Peripheral Neuropathic Pain July 2006 Case Study

**Lectures**

Since 1994 over 350 lectures nationally and internationally on a wide range of pain related topics