

Dr Noel Alpins’ Digest of Personal and Professional biography

Dr Noel Alpins has been specialising in Cataract and Refractive Surgery since founding NewVision Clinics in Melbourne in 1996. He speaks widely on these topics at national and international meetings and has been a keynote speaker and chair on many occasions. Most recently, Dr Alpins has been invited to present the Council Lecture at RANZCO, Adelaide 2010.

He pioneered small incision cataract surgery in Victoria and is a Foundation and current member of the Excimer Laser & Research Group. Dr Alpins is also an associate fellow at the University of Melbourne where he completed his Diploma of Ophthalmology in 1977 and FRACS prior to commencing practice in general ophthalmology.

Dr Alpins is on the RANZCO program committee and the editorial board of several ophthalmic information magazines and peer reviewed journals including Journal of Cataract and Refractive Surgery, EuroTimes, Ocular Surgery News and Indian Intraocular Implant & Refractive Society and has published widely in these and many book chapters. He is on the international advisory board for Refractive Surgery in China and is also an international council member of International Society of Refractive Surgery of the American Academy of Ophthalmology.

He has developed new techniques for analysing astigmatism that have been adopted as the standard for evaluating laser treatments in the literature and regulatory authorities. Dr Alpins developed the *ASSORT* computer program for vector planning of treatment and outcomes analysis of cataract and refractive surgery used by colleagues in Australia and overseas.

When Dr Alpins is not practising ophthalmology, he enjoys playing golf, skiing, going to live entertainment and spending time with Sylvia his wife and three daughters.

Practice: Private group practice Medical Director of Cheltenham Eye Centre and NewVision Clinics, Melbourne, Australia

Focus: Cataract/IOL and Refractive Surgery

Education: Medical degree (M.B., B.S.), University of Melbourne, 1970; Diploma of Ophthalmology, University of Melbourne, 1977.

Residency: Alfred Hospital, Australia, 1971-72

Fellowships and Certifications: Ophthalmology Registrar, Royal Victoria Eye & Ear Hospital, Australia, 1974-77; Fellow, Royal Australian & New Zealand College of Ophthalmologists, 1978; Fellow, Royal Australian College of Surgeons, 1978; Fellow, American College of Surgeons, 1985; and Fellow, Royal College of Ophthalmologists (UK), 1989; Fellow, American Board of Eye Surgery, 2005.

Memberships: International Intra-ocular Implant Club; American Society of Cataract and Refractive Surgeons; European Society of Cataract & Refractive Surgeons; International Society of Refractive Surgery; American Academy of Ophthalmology; Australian Medical Association.

Accomplishments: Developed the Alpins method of astigmatism analysis in 1991; founded ASSORT Pty. Ltd. in 1992 to market the *ASSORT* planning and outcome analysis computer program for cataract and refractive surgery. Is a recognized world authority on astigmatism analysis and treatment; speaks and chairs symposia at major meetings; serves as reviewer for peer-reviewed journals and writes regularly for ophthalmic information magazines. Performed first phacoemulsification procedure in Victoria in May 1987. Was first surgeon in Australia to employ computerized outcomes and astigmatism analysis. Won the 1993 Borland Paradox Challenge for the *ASSORT* program. Patented his method for treating and analyzing astigmatism (U.S. and other countries). Developed a new multizone, multipass algorithm for excimer laser myopia treatment adopted by the Melbourne Excimer Laser Group for patient treatment. Was nominated for inaugural Trokel Award for excellence in laser refractive surgery, 1994-95. Eye Advance Mumbai 2006 – Recipient of a Gold Medal for Distinguished Contribution to Ophthalmology. Invited speaker for Council Lecture, RANZCO, Adelaide 2010. Australia Day ambassador 2011 and 2012.

Publications: Has written numerous articles in newsmagazines and peer reviewed journals. Has served on editorial board, *Eyecare Technology* and *EyeWorld* magazine; and online consultation panel in areas of cataract surgery and refractive surgery for *Ocular Surgery News* and *EyeWorld* magazine.

www.newvisionclinics.com.au

Editorial Board Member: Ocular Surgery News, USA – Domestic Edition: Refractive Surgery section, appointed in 1998; Ocular Surgery News – International Edition, appointed in 1998; Journal of Cataract and Refractive Surgery, appointed in 1999; Eye World, appointed in 1999; Intraocular Implant & Refractive Society, appointed in 2007. Current investigator for astigmatism techniques for wavefront laser treatment to VisX and Bausch & Lomb Inc.

Professional Activities: Founding Member, Excimer Laser & Research Group, University of Melbourne 1991; Member, Protocol & Ethics Committee of the Excimer Laser & Research Group, University of Melbourne 1991; Past chairman of the Como Private Hospital Theatre and Infection Committee, 1985-92; Investigator and Global Advisor for VisX Inc. USA 1998-1999, 2005; Scientific Program Committee of Royal Australian and New Zealand College Ophthalmologists 2005; Associate Fellow, University of Melbourne, Department of Ophthalmology 2006.

Personal Characteristics: Willing to question authority and mainstream thinking in the pursuit of new methods and better patient care. Possesses keen analytical mind for problem-solving. Appreciates innovation born of the practical necessities of clinical practice as opposed to esoteric research typical of academic settings. Aggressively pursues continuing medical education to keep up with new developments.

Personal: Enjoys golf and skiing.

Dr Noel Alpins Curriculum Vitae

M.B., B.S	University of Melbourne	1970
D.O.	Diploma of Ophthalmology University of Melbourne	1977
F.R.A.N.Z C.O.	Fellow Royal Australian and New Zealand College of Ophthalmologists	1978
F.R.A.C.S.	Fellow Royal Australian College of Surgeons	1978
F.A.C.S.	Fellow American College of Surgeons	1985
F.R.C.Ophth.	Fellow Royal College Ophthalmologists (UK)	1989
IIC	Member of the International Intra-ocular Implant Club	1998
ABES	Member of the American Board of Eye Surgery	2005
AAO	Fellow American Academy of Ophthalmology	
ASCRS	Member American Society of Cataract and Refractive Surgeons	
ESCRS	Member European Society of Cataract and Refractive Surgeons	
ISRS	Member International Society Refractive Surgery	
AMA	Member Australian Medical Association	

Editorial Board Member:

Ocular Surgery News, USA – Domestic Edition: Refractive Surgery section	Appointed 1998
Ocular Surgery News – International Edition	Appointed 1998
Journal of Cataract & Refractive Surgery	Appointed 1999
EyeWorld	1999 – 2005
Eurotimes	Appointed 2007

Intraocular Implant & Refractive Society, India	Appointed 2007
Highlights of Ophthalmology	Appointed
Refractive Surgery in China	Appointed 2008
International Society Refractive Surgery	2008 – 2009
ISRN Surgery	Appointed 2010
Scientifica	Appointed 2012

Editorial Citations:

Journal Cataract & Refractive Surgery (see published articles and papers)	December 1997; March 1998; December 1998; Jan 2001; December 2006; August 2008; September 2008
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Keynote Speaker:

Date:	Conference:	Keynote Title:
February 2001	Third Biennial IIIC Meeting, Cape Town, South Africa	‘Advances in Laser Technology’
September 2001	ESCRS, Symposium Management of Astigmatism, Amsterdam 2001	‘How to improve visual performance by LASIK and PRK.’
July 2003	Fortieth Anniversary Meeting, Melbourne University Ophthalmology Department	‘Cataract Surgery – what we know and what we need to know.’
November 2005	MaSIS – Malaysian Small Incision Surgery Society	Guest Speaker – six 40 minute presentations

February 2006	ESCRS, Winter Refractive Surgery, Monaco Monte Carlo – Topography or Wavefront-Based Ablation	‘Combined wavefront and topography data for excimer laser surgery’
September 2006	ESCRS, London XXIV Congress of the ESCRS – Assessing outcomes in Refractive Surgery	‘Which outcomes to measure’
October 2006	Eye Advance, The VIth International Congress on Advances in Ophthalmology Invited presentation, Gold medal recipient	‘New horizons in the diagnosis and treatment of astigmatism in Refractive Laser Surgery’
April 2008	NYU Hospital teaching program, Bellevue Hospital.	‘Understanding astigmatism analysis and treatment in cataract and refractive surgery’
March 2009	Moran Eye Center, University of Utah, Salt Lake City – Grand Rounds – Visiting Professor	‘New horizons in the treatment and analysis of astigmatism’
September 2010	ESCRS, Paris XXVIII Congress of the ESCRS – Astigmatism Symposium	
November 2010	RANZCO, Sydney 42nd Annual Scientific Congress – Council Lecture	

Developer & Inventor of:

Inventor: New method of treating and analysing astigmatism

Holds multiple patents in USA, Australia, New Zealand, South Korea, Europe, Japan, China, and Canada.

ASSORT – Computer software program (Alpins Statistical System for Ophthalmic Refractive-surgery Techniques)

- Winner Borland International (Australia & NZ) Paradox programming award
- 1993.

Developer: Multizone Multipass algorithm for excimer laser myopia treatment adopted by Melbourne Excimer Laser Group for patient treatments (see published articles and papers).

Foundation Member of the Excimer Laser & Research Group, University of Melbourne	1991
Foundation Member of the Protocol & Ethics Committee of the Excimer Laser & Research Group, University of Melbourne	1991
Nominated for Inaugural Trokel Award for excellence in laser refractive surgery	1994-1995

Corporate Advisory Position:

Past Chairman of the Como Private Hospital Theatre and Infection Committee	1985-1992
Investigator and Global Advisor for VisX Inc. USA.	1998-1999
Investigator Bausch & Lomb – Laser Aberrometry treatment	2004-2005
Investigator AMO VisX – Laser Aberrometry treatment	2005
Royal Australian & New Zealand College of Ophthalmologist Program Committee Member	2005
Associate Fellow – Melbourne University Department of ophthalmology CERA	2006
Biosyntrix International Scientific Advisory Board	2005
Alcon Board of Advisors	2007

PUBLISHED ARTICLES AND PAPERS

FIRST AUTHOR

Alpins NA. A new method of analyzing vectors for changes in astigmatism. J Cataract Refract Surg 1993; 19:524-533

Alpins NA. New method of targeting vectors to treat astigmatism. J Cataract Refract Surg 1997; 23:65-75

Alpins NA. Vector analysis of astigmatism changes by flattening, steepening and torque. *J Cataract Refract Surg* 1997; 23:1503-1514

Alpins NA, Taylor HR, Kent DG, Lu Y, Liew M, Couper T, McGough V. Three multizone photorefractive keratectomy algorithms for myopia. Melbourne Excimer Laser Group. *J Refract Surg* 1997; 13:535-544

Alpins NA. Treatment of irregular astigmatism. *J Cataract Refract Surg* 1998; 24:634-646

Alpins NA, Tabin GC, Adams L, Aldred GF, Kent DG, Taylor HR. Refractive versus corneal changes after photorefractive keratectomy for astigmatism. *J Refract Surg* 1998; 14:386-396

Alpins NA. Astigmatism Analysis by the Alpins method. *J Cataract Refract Surg* 2001; 27:31-49

Alpins NA. Wavefront Technology: A New Advance That Fails to Answer Old Questions on Corneal vs. Refractive Astigmatism Correction. *J Refract Surg* 2002; 18:737-739

Alpins NA, Goggin M. Practical Astigmatism Analysis for Refractive Outcomes in Cataract and Refractive Surgery. *Surv of Ophthalmol* 2004; 49:109-122

Alpins NA, Stamatelatos G. Refractive Procedures for the Keratoconic Patient: An examination of LASIK and PRK, with an emphasis on PARK. *Cataract Refract Surg Today* 2006; Vol 6 No 8:78-80

Alpins NA, Stamatelatos G. Customized photoastigmatic refractive keratectomy using combined topographic and refractive data for myopia and astigmatism in eyes with forme fruste and mild keratoconus. *J Cataract Refract Surg* 2007; 33:591-602

Alpins NA, Stamatelatos G, Walsh G. Advances in planning refractive laser and cataract surgery. *Intraocular Implant & Refractive Society, India* 2007; Vol 3 No 2:31-34

Alpins NA, Stamatelatos G. Clinical outcomes of laser in situ keratomileusis using combined topography and refractive wavefront treatments for myopic astigmatism. *J Cataract Refract Surg* 2008; 34:1250-1259

JOINT AUTHOR

Taylor HR, Guest CS, Kelly P, Alpins NA. Comparison of excimer laser treatment of astigmatism and myopia. Excimer Laser and Research Group. *Arch Ophthalmol* 1993; 111:1621-1626

Taylor HR, Kelly P, Alpins NA. Excimer laser correction of myopic astigmatism. *J Cataract Refract Surg* 1994; 20(suppl):243-251

Tabin GC, Alpíns NA, Aldred GF, Carson CA, Taylor HR. Astigmatic change one year after treatment of myopia and myopic astigmatism with the excimer laser. Melbourne Excimer Laser Group. J Cataract Refract Surg 1996; 22:924-930

Brodovsky S, Couper T, Alpíns NA, McCarty CA, Taylor HR for the Melbourne Excimer Laser Group. Excimer laser correction of astigmatism with multipass/multizone treatment. J Cataract Refract Surg 1998; 24:627-633

Goggin M, Alpíns N, Schmid L. Current Opinion in Ophthalmology. "The management of irregular astigmatism". Current Opinion in Ophthalmology. Lippincott, Williams & Wilkins USA, April 2000; Vol.11, no.4:260-266.

BOOK CHAPTER AS FIRST AUTHOR

Alpíns NA, Tabin GC, Taylor HR, "Photoastigmatic refractive keratectomy" in *Excimer Lasers in Ophthalmology; Principles and Practice*. McGhee CNJ, Taylor HR, Gartry DS, Trokel SL, eds. Martin Dunitz Ltd., Publishers, London (UK) May 1997; 243-259.

Alpíns NA. "Effective Optical Zone and Visual Function" in *Custom LASIK: Surgical Techniques and Complications*. Buratto L, Brint S. Slack Inc, NJ 2003; Sect 2, Ch11.2, 432.

Alpíns NA, Terry C. "Vector Planning for Customized LASIK Treatment Incorporating Corneal and Optical Astigmatism Parameters" in *Custom LASIK: Surgical Techniques and Complications*. Buratto L, Brint S. Slack Inc, NJ 2003; Sect 2, Ch27.1, 680-684.

Alpíns NA, Walsh G. "Aberrometry and Topography in the Vector Analysis of Refractive Laser Surgery" in *Wavefront Analysis, Aberrometers and Corneal Topography*. Boyd BF, Agarwal AA. Highlights of Ophthalmology, Panama 2003; Ch19, 313-322.

Alpíns NA, Stamatelatos G. "Vector Analysis Applications to Photorefractive Surgery" in *International Ophthalmology Clinics – Surgical Correction of Astigmatism, Vol 43*. Sanchez-Thorin JC, Rocha G. Lippincott Williams & Wilkins, Pennsylvania 2003; 1-27.

Alpíns NA, Schmid L. "Combining Vector Planning with Wavefront analysis to Optimize Laser In-Situ Keratomileusis Outcomes" in *Wavefront Customized Visual Correction – The Quest for Super Vision II*. Krueger RR, Applegate RA, MacRae SM. Slack Inc, USA 2004; Ch38, 317-328.

Alpíns NA, Terry CM. "Astigmatism: LASIK, LASEK and PRK" in *Master Techniques in Cataract and Refractive Surgery*. Roy FH, Arzabe CW. Slack Inc, NJ 2004; Sect 2, Ch1, 151-160.

Alpins NA, Stamatelatos G. “Combined Wavefront and Topography Approach to Refractive Surgery Treatments” in *Corneal Topography in the Wavefront Era – A Guide for Clinical Application*. Wang M. Slack Inc, NJ 2006; Sect 3, Ch13, 139-143.

Alpins NA, Stamatelatos G. “Corneal Haze” in *Refractive Surgery Nightmares – Conquering Refractive Surgery Catastrophes*. Agarwal A. Slack Inc, NJ 2007; Sect 2, Ch 6, 43-54.

Alpins NA, Walsh G. “Accurate Biometry and Intraocular Lens Power Calculations” in *Refractive Surgery Nightmares – Conquering Refractive Surgery Catastrophes*. Agarwal A. Slack Inc, NJ 2007; Sect 4, Ch 24, 237-244.

Alpins NA, Stamatelatos G. “Optimizing Astigmatic Parameters in Lasik Treatments using Vector Planning” in *Mastering the Techniques of Customized LASIK*. Garg A, Lin JT, Alpins N, Bovet JJ, Pinelli R, Pajic B, Mehta CK. Jaypee Brothers Medical Publishers, New Delhi 2007; Sect 2, Ch13, 141-147

Alpins NA, “The Basics of Astigmatism and how to deal with it” in *Tips & Tricks LASIK surgery*. Kapoor S, Pallikaris IG, Rao SK. Jaypee Brothers Medical Publishers, New Delhi 2007; Ch 10, 141-152

Alpins NA, Stamatelatos G. “New Horizons of Optimizing Astigmatic Parameters in LASIK Treatments using Vector Planning” in *Mastering the Techniques of LASER Applications in Ophthalmology*. Garg A, Lin JT, Alio JL, Azad R, Bovet JJ, Pajic B, Mehta CK. Jaypee Brothers Medical Publishers, New Delhi 2008; Ch 54, 397-402

Alpins NA, Stamatelatos G. “Treating Stable Corneas: Combined Consideration of Wavefront and Topography-Guided Treatment” in *Irregular Astigmatism Diagnosis and Treatment*. Wang M. Slack Inc, NJ 2008; Ch 19, 177-183

Alpins NA, Stamatelatos G. “Asymmetrical Surgical Treatment Using Vector Planning” in *Irregular Astigmatism Diagnosis and Treatment*. Wang M. Slack Inc, NJ 2008; Ch 29, 263-268

Alpins NA, Walsh G. “Cylinder” in *Management of Complications in Refractive Surgery*. Alio J, Azar D. Springer-Verlag, Berlin Heidelberg 2008; Ch 6, 106-112

Alpins NA, Stamatelatos G. “Measuring Astigmatism” in *Mastering Refractive IOLs – the Art and Science* Chang D. Slack Inc, NJ 2008; Sect 10, Ch 159, 581-585

Alpins NA, “LRI’s with 2.2mm Incision and Surgery fore Dense Cataract using Vision Blue” in *Jaypee’s Video Atlas of Ophthalmic Surgery*. Garg A. Fine IH, Pallikaris IG et al. Jaypee Brothers Medical Publishers, New Delhi 2008; Sect 1, Video XXXVI

Alpins NA, “Lasik with Amadeus Microkeratome for High Myopia and Astigmatism (Astigmatic Lasik)” in *Jaypee’s Video Atlas of Ophthalmic Surgery*. Garg A. Fine IH, Pallikaris IG et al. Jaypee Brothers Medical Publishers, New Delhi 2008; Sect 2, Video XV

Alpins NA, "PRK with Mitomycin C for High Myopia" in *Jaypee's Video Atlas of Ophthalmic Surgery*. Garg A, Fine IH, Pallikaris IG et al. Jaypee Brothers Medical Publishers, New Delhi 2008; Sect 2, Video XVI

Alpins NA, Walsh G. "Aberrometry and Topography in the Vector Analysis of Refractive Laser Surgery" in *Refractive Surgery – 2nd Edition*. Agarwal A, Agarwal A, Jacob S. Jaypee Brothers Medical Publisher, New Delhi 2009; Sect 1, Ch 8, 79-87

Gulani AC, Nordan Lee, Alpins NA, Stamatelatos G. "Excimer Laser Photorefractive Keratectomy for Keratoconus" in *Keratoconus & Keratoectasia. Prevention, Diagnosis, and Treatment*. Wang M. Slack Inc, NJ 2010; Ch 14, 145-151

Alpins NA, Walsh G. "Aberrometry and Topography in the Vector Analysis of Refractive Laser Surgery" in *Dr Agarwal's Textbook on Corneal Topography Including Pentacam and Anterior Segment OCT – 2nd Edition*. Agarwal A, Agarwal A, Jacob S. Jaypee Brothers Medical Publisher, New Delhi 2010; Sect 4, Ch 12, 175-184

Alpins NA, Stamatelatos G. "Treatment and Analysis of Astigmatism During the Laser Era" in *Modern Ophthalmology: The Highlights – Volume II*. Boyd B. Jaypee – Highlights Medical Publishers, Panama 2010; Ch 24, Part X, 381-410

Alpins N, Stamatelatos G. Planning Keratorefractive Treatments Using Wavefront and Corneal Topography Data in Wang M, ed. *Corneal Topography: A Guide for Clinical Application in the Wavefront Era*. Thorofare, NJ: SLACK Incorporated 2012: 253-258

CONSULTATION SECTION

How would you advise a patient who had RK two years ago and now complains of binocular imbalance, fluctuating vision and night-time glare? *J Cataract Refract Surg*, April 1996; 22:285-286

What would you advise for re-treatment of an RK problem? *J Cataract Refract Surg*, Dec 1997; 23:1442-44

Centration of corneal procedures and identification of the steep astigmatic meridian. *J Cataract Refract Surg*, July 1998; 24:876-881

Induced Astigmatism following LASIK for Myopia with a Free Cap. *J Refract Surg* 2000; 16:375-378

A LASIK treatment of complication of incomplete flap. *J Cataract Refract Surg* 2000; 26:1109-1110

Refractive Surgical Problem, *J Cataract Refract Surg* 2002; 28:395-396

Refractive Surgical Problem – 27 year old male with risk of diplopia, *J Cataract Refract Surg* Nov 2004 Issue; 30:11:2245-2454

Refractive Surgical Problem – A 62 year old man had bilateral refractive lens exchange for 20/25 with +8.00 -2.75 x 5 in the right eye and 20/20 with +7.50 -3.25 x 175 in the left eye 1.5 year ago. The outcome is -0.50 -1.50 x 125 in the dominant left eye, and the patient is unsatisfied, J Cataract Refract Surg, Sep 2005 Issue, 31:9:1690

Refractive Surgical Problem – A 44-year-old man has overcorrection after PRK for hyperopia. After CLAPIKS in both eyes and epithelial removal with alcohol in the left eye, visual acuity cannot be improved, especially in the left eye, J Cataract Refract Surg, Nov 2005 Issue, 31:11:2048-2049

Refractive Surgical Problem – 32 year old male who had bilateral LASIK and developed a progressive and relatively quick loss of subjective UCVA, mainly in the left eye, J Cataract Refract Surg, March 2006 Issue, 32:3:382-383

Refractive Surgical Problem – A 55 year old healthy male patient had bilateral radial keratometry (RK) in 1975. Now the patient presents because of a decrease in visual acuity with bilateral cataract and is requesting lens surgery, J Cataract Refract Surg, Jan 2007 Issue, 33:1:8-9

EDITORIAL CITATIONS

From the Editor: Excimer Laser Technology: New options coming to fruition. J Cataract Refract Surg 1997; 23:1429-1430

From the Editors: Format for reporting refractive surgical data. J Cataract Refract Surg 1998; 24:285-287

From the Editor: Reporting astigmatism data. J Cataract Refract Surg 1998; 24:1545

From the Editor: How should we analyse astigmatic data? J Cataract Refract Surg 2001; 27:1-3

From the Editor: Astigmatism analysis: The spectrum of approaches. J Cataract Refract Surg 2006; 32:1977-1978

From the Editor: Reshaping the cornea: Which laser profiles should we use. J Cataract Refract Surg 2008; 34:1225

From the Editor: Impact of citation practices: Beyond journal impact factors. J Cataract Refract Surg 2008; 34:1419-1421

LETTER TO EDITORS

Letter to Editor: Evaluating Astigmatic Results. J Cataract Refract Surg. Nov 1993, 19:6:812

Letter to Editor: Surgically induced astigmatism. Aust/NZ J Ophthal. 1994; 22:217

Reply to Letter to Editor: Vector Analysis. J Cataract Refract Surg. 1994; 20:3:366-367

Letter to Editor: Excimer Laser Keratectomy for Astigmatism after PK. Ophthalmology. Alpins NA. 1996; 12:1985-1986.

Letter to Editor: A re-analysis of astigmatism correction. British J of Ophthal. 2002; 86:832

Letter to Editor: Analyzing refractive data. J Cataract Refract Surg. Feb 2004; 30:291-292

Letter to Editor: Combining wavefront and topography data for excimer laser surgery: The future of customized ablation? J Cataract Refract Surg. Nov 2004; 30:285-286

Letter to Editor: Combining wavefront and topography data. J Cataract Refract Surg. April 2005; 31:646-647

Letter to Editor: Terms Used for the Analysis of Astigmatism. J Refract Surg. June 2006; 22:6:528

Letter to the Editor: Special Articles and Peer Review. J Refract Surg. Feb 2007; 23:2:115

CRITIQUE OF PAPER

Article Critique of Holladay paper (J Cat Ref Surg). 'Analysis of aggregate surgically induced refractive change, prediction error, and intraocular astigmatism'. J Refract Surg. Nov-Dec 2001; 17(6):705-707

OCULAR SURGERY NEWS – Domestic USA

01 Oct 1992	Page 62	(ASSORT) Program can measure surgical improvement
15 Dec 1992	Page 80	Small incision triple procedure for cataract and glaucoma
01 Jan 1993	Page 41	Single-stitch surgery can increase ATR astigmatism
01 Aug 1993	Page 33	TIA – Know what you are aiming for in astigmatism surgery
15 Aug 1993	Page 43	A New method of astigmatism analysis
1 Nov 1993	Page 1 Page 126	PRK Cuts deep into RK Down Under ISRK Panel: Managing High Myopia
15 Jan 1994	Page 44	Target Emmetropia feature: What Type of Cataract Surgeon are you?
15 Sep 1994	Page 15	Alpins ASSORT Affords High-tech Outcomes Analysis.

1 Nov 1994	Page 164	Surgical Manoeuvres – An Excimer Laser PRK Technique
1 Dec 1994	Page 43	Adjusting Astigmatism Magnitude to Improve Excimer PRK Results
1 Mar 1995	Page 35	Astigmatism Round Table – Managing Astigmatism during Cataract Surgery
1 Jul 1995	Page 38	Cataract outcome program proliferate along with managed care
1 Aug 1995	Page 48	Target Emmetropia: Incorporating Refractive principles for better Cataract Surgery Results
15 Apr 1996	Page 42	Software Links Excimer to Topography
15 Aug 1996	Page 60	New Multizone-Multipass Technique for PRK
15 Oct 1997		Software computes accurate astigmatic correction nomograms for LASIK, PRK.
15 Mar 1998	Page 17	Corneal Topography Data enhance Astigmatic Outcomes
15 May 1999	Page 14	Vector Analysis of Astigmatism Correction: The Alpins Method (1 st in series of 5 articles)
1 Jun 1999	Page 19	Flattening, Steepening, Torque are crucial points in astigmatism surgery (2 nd in series of 5 articles)
15 Jun 1999	Page 44	Corneal versus refractive astigmatism: integrated analysis (3 rd in series of 5 articles)
1 Jul 1999	Page 6	The Treatment of Irregular Astigmatism (4 th in series of 5 articles)
15 Jul 1999	Page 8	Topographic Disparity: a useful new measure of irregular astigmatism (5 th in series of 5 articles)
1 Aug 2000	Page 1	Is the future of refractive surgery based on corneal topography or wavefront?
1 Sept 2000	Page 41	Wavefront is showing signs of success, but can it do it alone?
15 Oct 2000	Page 48	Supplement Issue 2000 World Almanac: Australian health system copes amid diverse landscape
15 Jan 2002	Page 1 & Page 63	Presbyopia strategies proliferating Presbyopia technologies include IOL and scleral approaches
Jan 2002		Refractive Surgery: Correcting astigmatism
15 Feb 2002	Page 21	Editorial Comment: Consider the vertex distance in refractive surgical procedures.
Jun 2002		Limitations of wavefront becoming apparent, some say.
1 Aug 2002	Page 1 & Page 31	Editorial Comment: Wavefront gains supporters, skeptics. Some foresee limitations in wavefront technology.
1 Oct 2002	Page 38	Software aims to reduce astigmatism after LASIK
1 Jun 2003	Page 1 & 5	Barriers to super-vision still remain
1 Jun 2003	Page 1 & 26	IOLS – Tools for microincision surgery wanted
1 Sept 2003	Page 14	As SARS threat dwindles, lessons linger for medical community
15 Oct 2003	Page 25	Mixing vector, wavefront values improves outcomes
1 Nov 2004	Page 14 – 15	ESCRS Paris highlights: Topography-based PRK in

keratoconus

1 Dec 2004	Page 24-26	Resultant astigmatism can be minimized with inclusion of topography data, surgeon says – ‘Vector planning can help surgeons find the optimal balance between corneal and refractive measurements’
Feb 2005		Innovation Spotlight – “Angles on using customised vector analysis to treat refractive patients”
15 Apr 2006	Page 40 & 42	Personalized nomograms ‘essential’ surgeons say – A personalized nomogram allows greater accuracy in refractive surgery, incorporating many variables that can affect outcomes
1 May 2007	46	Wavefront mixed with topography offers ‘ideal laser treatment’
1 Jun 2007	11	ASCRS Highlights – Refractive keratectomy with vector planning for keratoconus maintains outcomes at 10 years
15 Jun 2007	1	Laser calculation benefits keratoconus patients
15 Jun 2007	31	PARK with vector planning for keratoconus patients maintains 10-year outcomes

OCULAR SURGERY NEWS –

At Issue:

June 2000		At Issue: preferred regimen for curing haze for PRK
Aug 2000	Page 30	At Issue: is there a place in the future of refractive surgery for both PRK and LASIK?
Aug 2000	Page 44	At Issue: reasons for use of one microkeratome over any other.
Sept 2000	Page 64	At Issue: computer-related vision problems
Nov 2000		At Issue: Preventing infections
Mar 2001		At Issue: The effect of discount LASIK
July 2001	Page 52	At Issue: Are doctors seeing a rise in antibiotic resistance?
Sept 2001	Page 43	At Issue: Have custom corneal ablations improved LASIK results?
Nov 2001	Page 80	At Issue: Under what circumstances, if any, should a person under age 18 have LASIK?
Feb 2002	Page 12	At Issue: What do you prefer for LASIK enhancements, lifting the flap or recutting, and why?
Oct 2002	Page 50	At Issue: With the current economic climate in your country, is it feasible to expand your practice? If yes, how? If no, why?
Dec 2002	Page 14	At Issue: What will be the dominant refractive procedure in 2010?
June 2003	Page (international)	At Issue: What role do you think wavefront technology will play in surface ablation procedures

such as PRK and LASEK?

Mar 2004	Page 24 (domestic)	At Issue: How important is fluidics today for performing modern phacoemulsification, including microincision cataract surgery?
Apr 2004		At Issue: For what refractive errors would you consider refractive lens surgery over excimer laser procedures such as LASIK, LASEK or PRK?
Aug 2004	Page 16 (international)	At Issue: How important is fluidics today for performing modern phacoemulsification, including microincision cataract surgery?
Feb 2005	Page 12-14 (domestic) Page 19-21 (international)	At Issue: What is your preferred prophylactic regimen for cataract surgery?
June 2005	Page 25	At Issue: For what refractive errors would you consider lens-based surgery over laser-based procedures?
Aug 2005		At Issue: What is the maximum age you recommend a patient to receive LASIK?
Dec 2005	Page 7	At Issue: What do you think was the biggest news in Refractive Surgery in 2005 and why?
April 2006	Page 65 (domestic)	At Issue: For patients with myopia greater than 7D who desire refractive surgery, what treatment do you prefer, and why?
Sept 2006		At Issue: How long after initial LASIK surgery do you lift the flap, and why?
Sept 2006	Page 16 (international)	At Issue: For patients with myopia greater than 7D who desire refractive surgery, what treatment do you prefer, and why?
Sept 2006		At Issue: How beneficial is intraoperative pachymetry, and why?
Oct 2006	Page 60	At Issue: What is your highest limit for hyperopic correction in laser refractive surgery and why?
April 2007	Page 20 (international)	At Issue: Do you recommend the use of omega fatty acids to treat dry eye? Why or why not?
July/August 2011	Page 16	Preoperative OCT a significant Step

OCULAR SURGERY NEWS –
International Edition:

July 1992	Page 34	Improving surgery by analysis (ASSORT)
Sept 1992	Page 36	Single-stitch surgery can increase ATR astigmatism

Oct 1992	Page 42	Triple procedure for cataract and glaucoma
Oct 1993	Page 40	A New Method of Astigmatism Analysis
Nov 1993	Page 1	Patient Demand for Excimer Surpasses RK
Dec 1993	Page 22	TIA – A Method for Planning and Assessing Surgery
Oct 1994	Page 25	Paris 94 Supplement: Excimer Laser Surgery Planning. Practical Astigmatism Analysis for the PRK and AK Surgeon
Sept 1995	Page 40	Surgical Maneuvers – Incorporating refractive principles to achieve better cataract surgery results.
Dec 1997	Page 10	Software computes accurate astigmatic correction nomograms for LASIK, PRK
July 1998	Page 17	Corneal Topography Data enhance Astigmatic Outcomes
Aug 1999	Page 13	Vector Analysis of Astigmatism Correction: The Alpines Method <i>(Also translated into Chinese and Japanese editions)</i>
Sept 1999	Page 22	Flattening, Steepening and Torque are crucial points in astigmatism Surgery. Como utilizar el analisis vectorial para la correccion del astigmatismo <i>(Spanish editions)</i>
Oct 1999	Page 30	Corneal versus refractive astigmatism: integrated analysis
May 2000	Page 27	Treating naturally occurring irregular astigmatism
Jun 2000	Page 22	Topographic Disparity is a useful new measure of irregular astigmatism
Sept 2000	Page 41	Wavefront is showing signs of success, but can it do it alone? Wavefront alone?
Jan 2002		Presbyopia strategies proliferating
Feb 2002	Page 1 & 24	Editorial Comment: Consider the vertex distance in refractive surgical procedures. Presbyopia technologies include IOL and scleral approaches
Jun 2002		Limitations of wavefront becoming apparent, some say
Aug 2002		How wavefront works – a primer
Dec 2002	Page 10	Software aims to reduce astigmatism after LASIK
Jun 2003	Page 1 & 17	Barriers to super-vision still remain
July 2003	Page 1 & 16	Surgeons await IOLs, tools for microincision surgery
Sept 2003	Page 8	As SARS threat dwindles, lessons linger for medical community
Oct 2003		AUSCRS meeting on presentation
Nov 2004	Page 8 & 10	ESCRS Paris highlights: Topography-based PRK in keratoconus
June 2007	Page 6	ASCRS Highlights – Refractive keratectomy with vector planning for keratoconus maintains outcomes at 10 years
Sept 2007	Page 20 & 21 (international)	PARK with vector planning for keratoconus results stable at 10-year follow-up
Apr 2009	Page 1 & 8	Study finds that combined refractive treatment

June 2009	Page 17	reduces astigmatism more than wavefront alone Ocular residual astigmatism measurement could salvage 5% of dissatisfied LASIK patients
Jan 2010	1,4 & 5	Australian ophthalmologists oppose cut in Medicare rebate for cataract surgery

**OCULAR SURGERY NEWS –
International Spanish Edition**

Sept 1999	Page 16	El analisis vectorial para la correccion del astigmatismo (Edicion Internacional)
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OPHTHALMOLOGY TIMES

Nov 1993	Page 124	Program Analyzes Refines Refractive Surgery Technique
Mar 1994	Page 60	Vector Analysis Can Improve Predictability of Astigmatism
Aug 1997		Astigmatism Treatment uses Refractive, Topographic Data
Nov 1997	Page 14	Refraction Optimized by adjusting laser nomograms
March 1999	Page 14	PRK more accurate when astigmatism isn't also a factor
Oct 1999	Page 13	Combining data can yield best astigmatism results
Mar 2004	Page 42	Integration of vector planning enhances customized ablation outcomes

BIOMEDICAL TECHNOLOGY

May 1998		Ophthalmologist Develops Surgery Outcomes Software
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BORLAND CONNECTION

Winter 1993	Page 9-11	Top Paradox Programmer Wins Trip to US Conference
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CATARACT AND REFRACTIVE SURGERY TODAY: EUROPE

Sep 2010		iAssort Provides Astigmatic Analyses Using Topography
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EUROTIMES

Nov 1998	Page 29	An Australian approach to modulating corneal healing in PRK
Apr 2007	Page 22	Topography and wavefront linkage improves visual

Apr 2007	Page 26	outcomes XXIV Congress of the ESCRS, London 2006 – Assessing outcomes in refractive surgery
Jun 2008	Page 50	Practice Management – Doctor, how good are your results with patients like me?
Sept 2008	Page 14	Maximising astigmatism correction in cataract surgery
Sep 2010		Refractive and Corneal Parameters Should be Used
Oct 2010	Page 8	Utilising Topographers; Software tracks astigmatism changes to improve nomograms

EYECARE TECHNOLOGY

Jun 1994	Page 48	ASSORT – The Statistical Team for your Surgical Practice
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EYEWORLD

Sept 1997	Page 42	LASIK – Refractive surgery thought leaders
Dec 1998	Page 17	Symmetry in motion: A look at the Alpins' method for treating irregular astigmatism
Aug 1999	Page 37	Lasers address corneal irregularities
Sept 1999	Page 37	EW Dialogue: Placido v. nonplacido disk videokeratography
Mar 2000	Page 38	EW Dialogue: Challenging cylinders: Optimizing astigmatism assessment and treatment
	Page 42	EW Cover story : The astigmatic armamentarium
	Page 46	EW Cover Interview : Optimizing approaches to astigmatism assessment
May 2000	Page 64	The future of wavefront refraction as a diagnostic tool
May 2000	Page 70	Perceptions on wavefront technology from refractive leaders
Aug 2001	Page 48	Improving outcomes with personalized LASIK nomograms
Jan 2002		Refractive Surgery: Correcting astigmatism Corneal irregularity and dry eye?
Feb 2005	Page 56 & 57	Innovation Spotlight – Angles on using customized vector analysis to treat refractive patients (Maxine Lipner)
Oct 2007	Page 40 & 47	The View from Australia
July 2008	Page 11	In the journal - LASIK for myopic astigmatism

FRANJA OCULAR

Sept 1999 Page 35 Correccion quirurgica del astigmatismo: el metodo de Alpíns

HIGHLIGHTS OF OPHTHALMOLOGY

Issue No: 2 Page 14 Personal Experience in the Management of Irregular
2007 Astigmatism

HIGHLIGHTS OF OPHTHALMOLOGY – SPANISH EDITION

Numero: 2 Page 14 Experiencia Personal en el Manejo del
2007 Astigmatismo Irregular

INSIGHT

Aug 1998 Page 23 Ophthalmologist develops new method of analysing astigmatism

Nov 2007 Page 6 US FDA adopts Aust-developed laser technique as its standard

Sept 2008 Page 37 Melbourne surgeon's technique recognised as improving treatment of astigmatism

July 2009 16 Integrated eye care: how it works in a metropolitan setting in Victoria

JOURNAL OF REFRACTIVE SURGERY

Nov 1998 Page 672 ASSORT: Laser capabilities expanded for astigmatism treatment

MEDICAL ELECTRONICS

Sept 1998 The Alpíns Method: A breakthrough in Astigmatism Analysis

MEDICAL LASER REPORT

July 1998 Software Program Refines Astigmatism Outcomes

MIVISION

Dec 2008 Page 5 Aussie World First: New Astigmatism Treatment

Feb 2009 Page 16-19 Technique
The new frontier for clear vision

QUOTATIONS: EyeWorld

Sept 1999 Page 32 Excimer treatment options for hyperopic
astigmatism

PODIUM PAPER PRESENTATIONS

July 1989 Foundation member 500 club (Iolab Aust.)

Aug 1990 Royal Victorian Eye & Ear Hospital
Faculty Member: Phacoemulsification course

Nov 1991 Melbourne Excimer Laser & Research Group
Panellist: Initial VisX Excimer Laser course

Dec 1991 Rock Castle Private Hospital, Sydney
Faculty member: Phacoemulsification course (Alcon)

Mar 1991 Advanced Anterior Segment Symposium, Aspen, Colorado
Faculty member

May 1992 Como Private Hospital, Melbourne
Course Director & Surgeon
“A day of Excimer Emulsification surgery” course (Alcon)

July 1992 Melbourne Ophthalmic Alumni Meeting
Presenting author
“Has laser beam 193 exterminated RK?”

Nov 1992 Royal Australian College Ophthalmologists Annual
Scientific Meeting: -

Speaker: papers presented on 4 topics:
Combined Cataract, IOL and trabeculectomy;
Single stitch small incision cataract surgery;
Transverse astigmatic keratotomy and small incision Cataract
and implant surgery; &
Vector analysis formulae for astigmatism.

- Feb 1993 Royal Victorian Eye & Ear Hospital
 Instructor:
 Basic Microsurgical Course for new registrars
- May 1993 ASCRS Meeting, Seattle, USA
 Speaker:
 A new method of analysing vectors for changes in astigmatism
- Keratometry versus Refraction How to resolve the conflict in
 astigmatism surgery
- Course Director: Dr Sandra Belmont
 Faculty member:
 Keratorefractive Debates
- Course Director: Dr Kurt Buzard
 Faculty member:
 Surgical Management of Astigmatism
- June 1993 Melbourne Ophthalmic Alumni Meeting
 Presenting author:
 Surgical treatment of astigmatism: RK v Excimer
- July 1993 Canadian Rockies Symposium, Banff, Canada
 Course Director: Dr Howard Gimbel
 Faculty Member
- July 1993 ISRK meeting, Minneapolis, USA
 Speaker:
 Practical astigmatism analysis
 Planning □xcimer laser surgery.
- Aug 1993 Australian Registrars Cataract Surgery Symposium (Alcon)
 Faculty member
- Nov 1993 ISRK pre-A.A.O. Meeting, Chicago
 Astigmatism correction with the Excimer laser
 Surgically Induced Astigmatism with the Excimer laser
- A.A.O.
 Course Director: Dr Sandra Belmont, New York
 Invited Speaker:
 Keratorefractive Debates: RK v PRK

Course Director: Dr Kurt Buzard
Instructor:
Astigmatism Wet Lab

Course Director: Dr Howard Gimbel
Instructor:
Advanced Phacoemulsification Technique Course

- April 1994 ASCRS Meeting, Boston, USA
Speaker
Adjustment of Astigmatism Magnitude Excimer Laser Surgery
Planning Refractive Cataract Surgery
Keratorefractive Debates
VisX Protocol Course
- May 1994 Joint Meeting French Implant Society and Ocular Surgery News Int.
Edn. Paris, France
Faculty member and invited speaker:
Excimer Laser Surgery Planning
Practical Astigmatism Analysis for the AK & PRK Surgeon
- June 1994 International Congress Ophthalmology, Toronto, Canada
Invited faculty member
Discussionist for Dr Lindstrom's paper on:
Astigmatism in Cataract Surgery
Speaker: Excimer Laser Surgery
- Canadian Rockies Symposium, Banff, Canada
Invited faculty member
Moderator: PRK Session
Speaker: Results of Excimer Laser Surgery
Speaker: Planning of Refractive Cataract Surgery
- July 1994 Melbourne Ophthalmic Alumni Club Meeting
Presenting Author with Prof Hugh Taylor
Astigmatism Correction with the Excimer Laser
- Nov 1994 A.A.O. & ASCRS Joint Symposium, San Francisco, USA
Invited Speaker:
Surgical Correction of Astigmatism
- Course Director: Sandra Belmont
Invited faculty member:
Refractive Keratoplasty Debates
- Course Director: Manus Kraff

Invited faculty member:
The Excimer Laser 1995 – Evolution or a Revolution for
Ophthalmology?

Course Director: Howard Gimbel
Invited Instructor: Advanced Phacoemulsification Course

Appointed to Editorial Board of EyeCare Technology Magazine,
USA

Nominated for the Inaugural Trokel Award, VisX/Alcon
for excellence in Laser Refractive Surgery (see attached citation).

- Apr 1995 ASCRS & AAO Joint Symposium, San Diego, USA
Presenter:
Astigmatism Correction with the Excimer Laser
- Moderator of Scientific Session:
Incisional Techniques – Cataract Surgery
- Presenter:
Vector Analysis Formulas for Cataract Surgery
- June 1995 Melbourne Ophthalmic Alumni Meeting
Presenter:
Planning and Analysis of Refractive Cataract Surgery
- Aug 1995 Current Concepts in Ophthalmology, Hayman Island, Queensland
Invited faculty speaker:
Astigmatism surgery and analysis
- Sept 1995 Appointed to On-Line Consultation Panel – Ocular Surgery News,
USA and Domestic edition on:
Cataract Surgery
Refractive Surgery
- Nov 1995 ISRS pre-AAO Meeting, Atlanta, USA
Presenter:
Refractive Cataract Surgery Planning – Award for Best Presentation
of Session
- AAO Meeting, Atlanta, USA
Course Director: Dr Sandra Belmont, NY
Invited Speaker:
Keratorefractive Debates: PRK – The International Experience

- Nov 1995 AAO Meeting, Atlanta, USA:
- Course Director: Dr Manus Kraff
Invited Speaker:
The Lasers of Refractive Surgery – Evolution, Science and Economics
- Course Director: Dr Kurt Buzard Friedlander
Presenter/Wet Lab Instructor:
Surgical Correction of Astigmatism
- Jan 1996 Appointed as Retained Consultant to Alcon Laboratories, Texas, USA
- Jun 1996 ASCRS Meeting, Seattle, USA
- Presenter:
Refraction versus Optimisation for Treatment of Astigmatism by Excimer Laser
- Presenter:
New Method of Targeting Vectors for the Optimal Treatment of Astigmatism
- Jul 1996 Melbourne Ophthalmic Alumni Meeting
- Presenter:
Multizone Photorefractive Keratectomy
- Oct 1996 ISRS pre-AAO Meeting, Chicago USA
- Presenter:
Optimization versus Refraction combined with New Method of Targeting Vectors for the Optimal Treatment of Astigmatism
- Presenter:
Vector Analysis Formulae for Cataract Surgery
- Presenter:
PRK Multipass-Multizone for Treatment of Astigmatism
- AAO Meeting, Chicago USA

Course Moderator: Dr Manus Kraff
Complications of Laser Refractive Surgery management and
Prevention

Course Moderator: Dr Richard Troutman
Refractive Keratoplasty Debates

Course Moderator: Dr Kurt Buzard
Skills Transfer Program and Wet Lab

Mastel Symposium
Presenter:
Incision Placement for Refractive Cataract Surgery

Optimizing Excimer Laser Surgery for all Lasers

Nov 1996 ICIMRK Meeting, Perth, Australia

Session Moderator & Presenter:
Multizone Photorefractive Keratectomy

Optimisation versus Refraction

Vector Analysis Formulae for Cataract Surgery

Apr 1997 ASCRS Meeting, Boston USA

Session Moderator & Presenter:
Optimization versus Refraction to Treat Astigmatism by using the
Excimer Laser

Presenter:
Treatment with the NIDEK EC5000 using ASSORT software

Jul 1997 Melbourne Ophthalmic Alumni Meeting

Presenter:
Treatment with the NIDEK EC5000 using modified Algorithms and
multizone technique

Aug 1997 Melbourne Meeting of Optometrists,
Royal Victorian Eye & Ear Hospital
Title: Refractive Surgery Correction

Presenter:
Incisional Refractive Surgery – RK/Astigmatic Keratotomy

- Nov 1997 Royal Australian College of Ophthalmologists
Annual Scientific Meeting, Sydney
- Presenter:
Multizone photorefractive keratectomy
- Apr 1998 ASCRS Meeting, San Diego, USA
- Session Moderator:
Excimer Laser – PARK & LASIK Surgery
- Presenter:
Treatment of Irregular Astigmatism
- Presenter:
Vector Analysis of Astigmatism by Flattening, Steepening & Torque
- Sept 1998 ESCRS Meeting, Nice, France
- Presenter:
Multizone Photorefractive Keratectomy
- Chairperson of Scientific Session & Presenter:
Vector Analysis of Astigmatism by Flattening, Steepening & Torque
- Member & Presenter:
Inaugural Meeting – VisX Global Advisors Forum
- Nov 1998 Appointed Member of the General Medical Council, UK
- AAO/ISRS Meeting, New Orleans, USAModerator & Presenter:
Astigmatism Management
- Title: Balancing Refractive and Corneal Values in LASIK and PRK
Surgery Planning
- Presenter:
Refractive versus Corneal Changes after PRK for Astigmatism
- April 1999 ASCRS Meeting, Seattle, USA
- Session Moderator & Presenter:
Treatment of Mixed Astigmatism by LASIK with the VisX STAR
- Presenter:
Improving Best Spectacle Corrected Acuity without Changing
Spectacles

Presenter:
Which Numbers are Missing from your Topographer?

Course Faculty – First International Symposium on the Surgical Correction of Astigmatism

The optimization of astigmatism treatment when performing LASIK and PRK

Course Moderator:
Astigmatism Treatment and Analysis for the Cataract and Refractive Surgeon

Sept 1999 Appointed Member of the Editorial Board, International Edition of Ocular Surgery News

Appointed Member of the Editorial Board, Journal of Cataract & Refractive Surgery (USA and European editions)

ESCRS Meeting, Vienna
Course Moderator:
Astigmatic Analysis for the Cataract & Refractive Surgeon

Presenter:
Surgery to regularize the irregular cornea and improve visual performance by LASIK or PRK technique

Presenter:
Which numbers are missing from your topographer?

Second Annual Meeting of VisX Global Advisors Forum

Nov 1999 Royal Australian College of Ophthalmologists
Annual Scientific Meeting, Melbourne

Presenter:
Refractive versus Corneal Changes after PRK for Astigmatism

Faculty: Cataract Surgery Course
Astigmatism: Control/Modification

Course Faculty: LASIK Complications Regression and Re-Treatment

Jan 2000 Appointed Member of the Editorial Board, EyeWorld Scientific Magazine

- May 2000 ASCRS Meeting, Boston, USA
- Course Faculty – 2nd International Symposium on the Surgical Correction of Astigmatism:
An effective combined topographic and refractive link to LASIK surgery.
- Course Faculty & Co-Presenter:
Astigmatism treatment and analysis for the cataract and refractive surgeon.
- Co-Moderator & Presenter:
Calculations for mixed astigmatism treated by the VisX STAR and LASIK
- Presenter:
Vector planning for LASIK surgery: Integrating topography and wavefront analysis treatment modalities.
- Highlights of the ASCRS 2000 Annual Meeting
Program: Wavefront Analysis/Tomography – Vector Planning for LASIK Surgery
Presentation: Integrating topography and wavefront analysis treatment modalities
Boston: Ophthalmology Interactive; 2000 (CD-ROM)
- Nov 2000 Royal Australian College of Ophthalmologists: Scientific Meeting, Sydney
- Chairman & Presenter:
Session: Refractive Surgery II
Title: Vector Planning for LASIK Surgery:
Integrating topography and wavefront analysis treatment modalities.
- Co-Presenter Symposium: The Changing Face of Cataract Surgery
Presentation: Minimising Induced Astigmatism following Cataract Surgery
- Feb 2001 Third Biennial IIC Meeting, Cape Town, South Africa
Keynote Speaker:
Advances in laser Technology
- Presentation:
LASIK 1 – Refractive diagnostics and surgical planning
- Course Participant:
Biometry and advanced IOL calculations

- Apr-May
2001
- ASCRS Meeting, San Diego, USA
- Session Co-Moderator:
Myopia/Hyperopia/Astigmatism
- Presenter:
LASIK Astigmatism Analysis by the Alpins method
- Presenter:
Achieving LASIK Super Vision by Minimizing and Regularizing
Topographic and Wavefront Refraction Astigmatism
Awarded Best Paper of Session
- Course Presenter:
Vector Planning, Practical Astigmatism Analysis and LASIK
Nomogram Development for the Cataract and Refractive Surgeon
- Course Faculty – 3rd International Symposium on the Surgical
Correction of Astigmatism
Incisional, Photoablative and Toric Pseudophakic and Phakic
Intraocular Lenses.
- Presentation:
An effective combined topographic and refractive link to LASIK
surgery
- Sept 2001
- ESCRS Meeting, Amsterdam, Holland
- Course Presentation – LASIK Astigmatism Analysis by the Alpins
Method
Achieving LASIK Supervision by minimising and regularising
topographic and wavefront refraction astigmatism.
- Invited Symposium
Management of Astigmatism
How to improve visual performance by LASIK and PRK
- Faculty Symposium
- Nov 2001
- Royal Australian College of Ophthalmologists
- Presenter:
Wavefront analysis and vector planning
'How should we be using these modalities?'
- April 2002
- ICO, Sydney
- Aberrometry Wavefront Measurement

Presenter:
Wavefront analysis, vector planning – how we should be using these modalities?

Refractive Aspects of Cataract Surgery

Moderator & Presenter:
A comparison of incision induced astigmatism between forceps and injector
insertion of foldable implants

April 2002 ASCRS, Philadelphia

Presenter
Scientific Paper: Efficacy of LASIK Myopic Astigmatism Correction with VISX Star Laser

Presenter
Course: Vector Planning, Practical Astigmatism Analysis, and LASIK Nomogram Development for the Cataract and Refractive Surgeon

Sept 2002 ESCRS Meeting, Nice, France

Presenter:
Session IV – Refractive Surgery New Techniques II
“Efficacy of LASIK hyperopic astigmatic correction with VisX STAR Laser”

Presenter:
Session I – Keratorefractive Surgery or myopia IV
Co-Moderator with Dr Thomas Kohnen
“Wavefront analysis, vector planning – How should they be used together?”

Course Presenter:
Vector Planning, practical astigmatism analysis and LASIK nomogram development for the cataract and refractive surgeon.

Nov 2002 AUSCRS Meeting, Canberra

Session Moderator and Presenter:
Wavefront analysis, vector planning- How we should be using these modalities.

Nov 2002 AMO Meeting, Noosa

Presentation:
LASIK and Dry Eye New Approaches to Patient Management

Presentation:
Technical aspect of flap creation with the Amadeus Microkeratome

April 2003 ASCRS Meeting, San Francisco, USA

Presenter – Paper:
Wavefront Analysis and Vector Planning:
How to Use Them Together

Course Presenter:
Vector Planning, Practical Astigmatism Analysis and LASIK
Nomogram Development for the Cataract and Refractive Surgeon

Course Presenter:
Making the Most of Wavefront and Vector Planning LASIK.
Practical and Theoretical Aspects of Irregular Astigmatism
Management

July 2003 AUSCRS, Port Douglas

Presenter – Paper:
Treatment of Astigmatism in Keratoconus using *ASSORT* Vector
Planning

July 2003 40th Anniversary Meeting, Melbourne University Department of
Ophthalmology
Invited speaker
Cataract Surgery – What we know and what we need to know.

Aug 2003 Alcon Impact Meeting, Punta Mita, Mexico
Invited sponsored registrant

Feb 2004 AMO Meeting, Noosa
Technical aspects of flap creation with the Amadeus microkeratome

Sept 2004 ESCRS Congress, Paris France

Course Presenter:
Vector Planning, Practical Astigmatism Analysis and LASIK
Nomogram Development for the Cataract and Refractive Surgeon.

Presenter – Paper:
Customized PARK treatment of keratoconus using combined
topographic and refractive data

Session Moderator:
'Keratorefractive Surgery Outcomes – Myopia 1'

61 Ocular Surgery News Supersite 29 September 2004
Paper listed as "Top Stories" of ESCRS Meeting

Nov 2004 RANZCO, Melbourne, Australia

Presenter – Paper:
PARK treatment of Keratoconus using corneal and refractive
astigmatism measurements

Mar 2005 ALCON Seminar: Optimising Cataract Surgery Outcomes (OCSO),
Sydney and Brisbane, Australia

Invited Speaker:
Infiniti™ Vision System: Advantages and Techniques

Sept 2005 ESCRS Meeting, Lisbon Portugal

Course Presenter:
Making the most of wavefront and vector planning. LASIK: Practical
and theoretical aspects of irregular astigmatism management

Course Presenter:
Vector planning, practical astigmatism analysis and LASIK
nomogram development for the cataract and refractive surgeon

Nov 2005 Alcon MaSIS Meeting, Malaysia

Invited Speaker:
How to do a Good Biometry for Every Patient
Planning & Analysis of Astigmatism Management for Refractive
Cataract

Invited Speaker:
IOL Selection for Post Refractive Laser Patients
Advantages of Refractive IOL's

Invited Speaker:
Refining Phaco Techniques for Refractive Cataract Surgery

Invited Speaker:

Understanding Vector Analysis Practical Astigmatism Analysis

- Feb 2006 ESCRS Winter Refractive Surgery, Monaco Monte Carlo
- Invited Speaker:
Combining wavefront and topography data for \square ptimiz laser surgery
- Presenter – Invited Case presentation:
Customized PARK treatment of mild keratoconus using combined topographic and refractive data
- Feb 2006 World Ophthalmology Congress, Sao Paulo Brazil
- Invited Speaker:
Refractive Lens Surgery – Indications, Advantages, Disadvantages
“When cataract surgery is indicated where good visual acuity prevails”
- Invited Speaker:
Refractive Surgery on the Edge
“Upgrading wavefront technology by combining topography parameters”
- Chair Person:
Cataract Surgery and IOL Implantation in Complex Situations
- Invited Speaker:
Cataract Surgery and IOL Implantation in Complex Situations
“Incisions placement and astigmatism management in Cataract surgery”
- Mar 2006 ASCRS Meeting, San Francisco USA
- Course Presenter:
Managing Regular and Irregular Astigmatism with Conventional and Wavefront Techniques in Cataract and Refractive Surgery
- Sept 2006 ESCRS Meeting, London UK
- Course Presenter:
Managing regular and irregular astigmatism with conventional and wavefront techniques in cataract and refractive surgery
- Session Moderator: Keratorefractive Surgery Outcomes – Myopia
Presenter – Paper:
Clinical outcomes study of LASIK using combined wavefront and topography values for myopia and astigmatism

Symposium Presenter:
Assessing outcomes in Refractive Surgery. “Which outcomes to measure”

Oct 2006 Eye Advance, Mumbai India

Recipient of the Distinguished Service Gold Medal in Ophthalmology

Invited Presenter & Guest Lecture
Refining Outcomes in Refractive Cataract Surgery

Advantages of Refractive IOLs

Nov 2006 RANZCO, Sydney Australia

Chair Person:
Contemporary cataract surgery: six steps of evidence and experience-based decision making

Presenter:
PARK treatment of mild keratoconous

Presenter – Speaker Corner:
Using Alcon infinite for small incision ultrasleeve for coaxial small incision surgery

Symposium Presenter:
Critical considerations in contemporary cataract and refractive surgery. – “The ABC of accurate biometry and current formulae”

March 2007 IIC, Kyoto Japan

Panellist:
Advances In Intra-Ocular Lens Implantation

April 2007 ASRCS, San Diego USA

Course Presenter:
Managing Regular and Irregular Astigmatism with Conventional and Wavefront Techniques in Cataract and Refractive Surgery

Presenter – Paper:
Customized PARK Treatment of Myopia and Astigmatism in Form Fruste and Mild Keratoconus Using Combined Topographic and Refractive Data

Panellist:
Keratorefractive: New Devices

Sept 2007 ESCRS, Stockholm Sweden

Course Presenter:
Managing Regular and Irregular Astigmatism with Conventional and Wavefront Techniques in Cataract and Refractive Surgery

Presenter – Paper:
Clinical outcomes of LASIK using wavefront alone versus wavefront plus vector planning treatments for myopia and astigmatism.

Presenter – Paper:
Customized PARK treatment of myopia and astigmatism in forme fruste and keratoconus using combined topographic and refractive data

Nov 2007 RANZCO, Perth Australia

Course Presenter:
Critical Considerations in Contemporary Cataract Surgery – Dealing with poor wound construction and floppy iris

Presenter – Paper:
Wavefront versus wavefront and vector planning in treatment of myopia and astigmatism

Symposium Presenter:
Contemporary Issues in Refractive Surgery – Combined wavefront-topography ablations and the Optimal Ablation Profile”

Feb 2008 ESCRS, Barcelona Spain

Session Moderator: Laser Refractive Surgery

Presenter – Paper:
What does true integration of topographic and refractive wavefront parameters in Lasik involve?

Presenter – Paper:
Selection criteria for patients’ eligibility for PARK vector planning treatment of myopia and astigmatism in forme fruste and mild keratoconus.

Invited Symposium Speaker:
Focus Session: Controversies in how to correct astigmatism in cataract surgery.

Presenter:
Calculation of astigmatism at the corneal plane is more reliable.

April 2008 ASCRS, Chicago USA

Course Presenter:
Managing Astigmatism with Toric IOLs and LRIs in Cataract and Refractive Surgery

Presenter – Paper:
Selection Criteria for Patient Eligibility for PARK Vector Planning Treatment of Myopia and Astigmatism in Forme Fruste and Mild Keratoconus

Session Moderator: Cornea Keratoplasty; New Techniques

Presenter – Paper:
Considerations for Effective Integration of Topographic and Refractive Wavefront Parameters in LASIK

April 2008 New York USA

Presenter:
Combining topography and refractive data for the treatment of keratoconus and wavefront guided patients

April 2008 Bellevue Hospital NYU, New York USA

Presenter:
Understanding astigmatism analysis and treatment in cataract and refractive surgery

June 2008 World Ophthalmology Congress, Hong Kong

Invited Speaker:
Astigmatism Management in RCS- LRI's and their Refinement.

Does Vector Planning render PARK safe in Keratoconus?

Combining Preoperative Topography and Refractive Data with Vector Planning.

On Axis Incisions and Opposite (single) LRIs for Astigmatism Reduction

Session Chair: Astigmatism management in cataract surgery

Session Chair: Wavefront VS optimized aspheric VS topo-refractive combined, which to choose?

- Nov 2008 RANZCO, Melbourne Australia
- Convenor: Course –Critical Considerations in Contemporary Cataract Surgery – Evidence or Experience-Based Practice
- Presenter: Dealing with poor wound construction and induced astigmatism
- Presenter: Integration of Topographic and Refractive Wavefront Parameters
- Presenter: Astigmatism Management in Refractive Cataract Surgery
- March 2009 SALT LAKE CITY
Moran University
- Invited Speaker: New horizons in the treatment and analysis of astigmatism
- April 2009 ASCRS, San Francisco USA
- Course Presenter:
Managing Astigmatism with Toric IOL's and LRI's in Cataract and Refractive Surgery
- Presenter - Paper:
Managing Patients with Mismatched Corneal and Refractive Parameters when Treating Astigmatism
- Session Moderator: Intraocular Surgery, Toric IOLs
- Sep 2009 ESCRS, Barcelona Spain
- Invited Speaker:
Astigmatism Analysis
- Course: Managing Astigmatism with Toric Implants and LRI's in Cataract and Refractive Surgery
- Presenter: What does a true integration of topographic and refractive wavefront parameters in excimer laser surgery involve
- Nov 2009 RANZCO, Brisbane Australia
- Paper: Managing Patients with Mismatched Corneal and Refractive Parameters when Treating Astigmatism
- Paper: Toric IOL techniques and what to do when too much cylinder is left over

- Paper: Techniques for calculating IOL power in cases of prior myopic excimer laser
- Apr 2010 ASCRS, Boston USA
- Course: Managing Astigmatism with Toric Implants and LRI's in Cataract and Refractive Surgery
- Paper: Vectorial analysis of astigmatism utilizing Corneal Topography parameters and a newly integrated software module
- Sep 2010 ESCRS, Paris
- Invited Speaker: Astigmatism Symposium
- Course: Managing Astigmatism with Toric Implants and LRI's in Cataract and Refractive Surgery
- Paper: Vectorial analysis of astigmatism utilizing Corneal Topography parameters and a newly intergrated software module
- Session Moderator: Laser Surgery
- Nov 2010 RANZCO, Adelaide Australia
- Invited Speaker: Council Lecture
- Mar 2011 ASCRS, San Diego USA
- Course Presentation: Managing Astigmatism with Toric IOLs and LRIs in Cataract and Refractive Surgery
- Paper Presentation: Assessment of topographic semi-meridian parameters to determine corneal astigmatism & irregularity
- Session Moderator: Intraocular Surgery Astigmatism Management
- Sept 2011 ESCRS Vienna, Austria
- Course Presentation: Managing & Analysing corneal astigmatism, LRIs & Toric implants in Cataract & Refractive surgery

Paper Presentation: Parameters for overall corneal astigmatism and irregularity using topographic semi meridian value

Oct 2011 AAO Orlando, USA

“Ask the Experts”
Challenges in Premium IOL.

Nov 2011 RANZCO Canberra, Australia

Paper Presentation: Evaluating the ocular residual astigmatism (ORA) of patients when treating astigmatism

Jan 2012 HAWAIIAN EYE, Maui
Chair: Cataract/Refractive surgery session

Presentation: ‘The Essentials of Toric and LRI Planning in Refractive Cataract Surgery’

Presentation: ‘Ocular Residual Astigmatism (ORA)- An important Preoperative Parameter for Excimer Laser Surgery’

April 2012 ASCRS, Chicago USA

Course Presentation: “Managing Astigmatism with & Toric Implants and LRI’s in Cataract Refractive Surgery”

Paper Presentation: “Method of Determining Topographic corneal Astigmatism using Multiple Diameter Rings CorT

Panel Moderator: “Intraocular Surgery Toric IOLs”

TROKEL AWARD NOMINATION

Noel Alpins practices in suburban Melbourne principally in cataract and refractive surgery in private group practice. He commenced refractive surgery when he started performing radial keratotomy in 1984 and made his first presentation on astigmatism at the Australian College Meeting in Melbourne in 1986.

Since 1991, Noel has been a leading member of the Melbourne Excimer Laser and Research Group at Melbourne University, and had an active involvement in establishing the protocol for treatment with the VisX 20/20 laser in Melbourne, prior to the commencement of Excimer laser surgery in November 1991.

In June 1992 when multizone elliptical treatment surgery was introduced, Noel was instrumental in developing the treatment paradigms for the multizone distribution of spherical refractive error, as well as the astigmatism zonal distribution employed by our Group.

Noel has developed an outcomes analysis software program, a comprehensive eye surgery analysis called the Alpins Statistical System for Ophthalmic Refractive-Surgery Techniques (ASSORT). This program won the 1993 Borland Paradox Application Language programming contest. A very favourable, independent evaluation of the usefulness and content of the software program has been published in the ophthalmic press.

Noel has developed a new method of treating and analysing astigmatism that developed the concept of Target Induced Astigmatism (TIA) which incorporates Topography and Refraction into the surgical plan and analysis of Excimer laser surgery. Using this vector analysis method to analyse the results from the Melbourne group in February 1993 he was the first to quantify the trend of under-correction of magnitude of astigmatism, which enabled the adjustment factor of 1.2 to be utilised in Melbourne from April 1993. Other centres followed Melbourne's lead that resulted from Noel's analysis. He presented the results of this adjustment at the ASCRS Symposium in Boston in 1994.

Noel quantified the surgically induced astigmatism with PRK (spherical) by topography and refraction, and presented this with Melbourne's PARK results at the ISRK Symposium prior to the AAO in Chicago in 1993 and also in Minneapolis in July 1993.

The analysis which he presented demonstrated that the failure to achieve the axis of the applied treatment (the angle between the SIA and TIA) is a major factor in our failure to achieve total success in the treatment of astigmatism.

Noel, using his method, demonstrated differences in the effectiveness between the elliptical and sequential techniques when utilising the VisX 20/20 laser in Melbourne, and presented the results at the International Congress of Ophthalmology in Toronto as an invited faculty member at the Canadian Rockies Symposium in Banff, and acted as co-moderator of the session on photorefractive keratectomy.

Noel is currently co-author on a paper for publication encompassing all the above aspects of non-incisional refractive surgery. He has already had published scientific

papers in the Journal of Cataract and Refractive Surgery and Archives of Ophthalmology. He has written extensively for the ophthalmic information journals (Ocular Surgery News, Ophthalmology Times and EyeCare Technology) and was recently appointed a member of the Medical Editorial Board of the latter publication.

Noel was invited to speak as a faculty member in Paris (May 1994) at the French Implant Society and Ocular Surgery News Symposium and presented his and the Group's experiences with astigmatism surgery in addition to his own developed concepts. Noel was also an invited faculty member at the ASCRS Symposium prior to the AAO meeting in San Francisco, and gave two presentations on understanding astigmatism and a third on its practical application to Excimer laser surgery. He has been a course faculty member on Kerato-Refractive debates at both ASCRS and AAO these past two years, and participates as an instructor at both Astigmatic Keratotomy and Phacoemulsification courses.

Noel felt very honoured and privileged to have his work on astigmatism acknowledged by the invitation he received to participate as a speaker at the ASCRS/AAO Symposium on Non-incisional Refractive Surgery at the recent Academy meeting in San Francisco.

Noel's innovative work has made an outstanding contribution to Excimer Laser Surgery by the determination of the optimal treatment of astigmatism addressing both pre-operative values of astigmatism - topographic and refractive. The measured introduction of topography into the surgical plan enables the targeting of reduced corneal astigmatism and optimising the astigmatic result for each individual eye.

Noel has had a commitment to the achievement of excellence in refractive outcomes. This goal has been demonstrated by the considerable commitment of his own time in determining the astigmatic outcomes of our Group, and the expenditure of his own resources in financially supporting the collection, evaluation and analysis of the Group's data.

COUNTRY	APPLICATION NO.	PATENT NO.	FILING DATE	ISSUE DATE	TITLE
PCT	PCT/AU93/00090		04/03/93		METHOD OF ANALYSING ASTIGMATISM

					AND APPARATUS FOR PERFORMING CORNEAL SURGERY
Australia	36231/93	663930	04/03/93	13/02/1996	METHOD OF ANALYSING ASTIGMATISM AND APPARATUS FOR PERFORMING CORNEAL SURGERY
Canada	2138388		04/03/93		METHOD OF ANALYSING ASTIGMATISM AND APPARATUS FOR PERFORMING CORNEAL SURGERY
Europe (Ratified in Germany, Spain, France, Great Britain, Greece, Ireland, Italy)	93905106.6	653929	04/03/93	07/11/2001	METHOD OF ANALYSING ASTIGMATISM AND APPARATUS FOR PERFORMING CORNEAL SURGERY
Japan	504815/94		04/03/93		METHOD OF ANALYSING ASTIGMATISM AND APPARATUS FOR PERFORMING CORNEAL SURGERY
Korea	95-700482	0262847	04/03/93	07/11/2001	METHOD OF ANALYSING ASTIGMATISM AND APPARATUS FOR PERFORMING CORNEAL SURGERY
New Zealand	249444	249444	04/03/93	04/11/1996	METHOD OF ANALYSING ASTIGMATISM AND APPARATUS FOR PERFORMING CORNEAL SURGERY
USA	927616		10/08/92		METHOD OF ANALYSING ASTIGMATISM AND APPARATUS FOR PERFORMING CORNEAL SURGERY
USA	313056	5514124	30/09/94	07/05/1996	METHOD OF ANALYSING ASTIGMATISM AND APPARATUS FOR PERFORMING

					CORNEAL SURGERY
USA	08/618535	5749867	19/03/96	12/05/1998	METHOD FOR ANALYSING ASTIGMATISM AND APPARATUS FOR PERFORMING CORNEAL SURGERY
USA	09/075675	6086579	11/05/98	11/07/2000	METHOD FOR ANALYSING ASTIGMATISM AND APPARATUS FOR PERFORMING CORNEAL SURGERY

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PCT	PCT/AU96/00257		03/05/96		METHOD FOR SURGICALLY ACHIEVING MINIMUM ASTIGMATISM MEASURED REFRACTIVELY AND TOPOGRAPHICALLY
Australia	54903/96	704812	03/05/96	12/08/1999	METHOD FOR SURGICALLY ACHIEVING MINIMUM ASTIGMATISM MEASURED REFRACTIVELY AND TOPOGRAPHICALLY
Canada	2227756		03/05/96		METHOD FOR SURGICALLY ACHIEVING MINIMUM ASTIGMATISM MEASURED REFRACTIVELY AND TOPOGRAPHICALLY
China	0410032580.9		03/05/96		METHOD FOR SURGICALLY ACHIEVING MINIMUM ASTIGMATISM MEASURED REFRACTIVELY AND TOPOGRAPHICALLY
China	96195837.5	159592	03/05/96	23/06/2004	METHOD FOR SURGICALLY ACHIEVING MINIMUM ASTIGMATISM MEASURED REFRACTIVELY AND TOPOGRAPHICALLY
Europe	96911843.9		03/05/96		METHOD FOR SURGICALLY ACHIEVING MINIMUM ASTIGMATISM MEASURED REFRACTIVELY AND TOPOGRAPHICALLY
Hong Kong	04109727.7		20/01/99		METHOD FOR SURGICALLY ACHIEVING MINIMUM ASTIGMATISM MEASURED REFRACTIVELY AND TOPOGRAPHICALLY
Hong Kong	99100258.9	HK1015249	20/01/99	07/01/2005	METHOD FOR SURGICALLY ACHIEVING MINIMUM ASTIGMATISM MEASURED REFRACTIVELY AND TOPOGRAPHICALLY
Japan	500002/97		03/05/96		METHOD FOR SURGICALLY ACHIEVING MINIMUM ASTIGMATISM MEASURED

					REFRACTIVELY AND TOPOGRAPHICALLY
Korea	1997-0709176	0484620	03/05/96	13/04/2005	METHOD FOR SURGICALLY ACHIEVING MINIMUM ASTIGMATISM MEASURED REFRACTIVELY AND TOPOGRAPHICALLY
New Zealand	306353	306353	03/05/96	20/12/1999	METHOD FOR SURGICALLY ACHIEVING MINIMUM ASTIGMATISM MEASURED REFRACTIVELY AND TOPOGRAPHICALLY
USA	476449	5740815	07/06/95	21/04/1998	METHOD FOR SURGICALLY ACHIEVING MINIMUM ASTIGMATISM MEASURED REFRACTIVELY AND TOPOGRAPHICALLY
USA	09/063678	5975084	21/04/98	02/11/1999	METHOD FOR SURGICALLY ACHIEVING MINIMUM ASTIGMATISM MEASURED REFRACTIVELY AND TOPOGRAPHICALLY

COUNTRY	APPLICATION NO.	PATENT NO.	FILING DATE	ISSUE DATE	TITLE
USA	09/579700	6467906	26/05/00	22/10/2002	SYSTEM FOR EVALUATING AND CORRECTING IRREGULAR ASTIGMATISM IN THE EYE OF A PATIENT