



Pacific Cataract and Laser Institute: Competing in the LASIK Eye Surgery Market

John J. Lawrence
Linda J. Morris
University of Idaho

Dr. Mark Everett, clinic coordinator and optometric physician (OP) of the Pacific Cataract and Laser Institute (PCLI) office in Spokane, Washington, looked at the ad that Vancouver, Canada-based Lexington Laser Vision (LLV) had been running in the Spokane papers and shook his head. This was not the first ad nor the only clinic advertising low-priced LASIK eye surgeries. Dr. Everett just could not believe that doctors would advertise and sell laser eye surgery based on low price as if it were a stereo or a used car. The fact that they were advertising based on price was bad enough, but the price they were promoting—\$900 for both eyes—was ridiculous. PCLI and its cooperating optometric physicians would not even cover their variable cost if they performed the surgery at that price. A typical PCLI customer paid between \$1,750 and \$2,000 per eye for corrective laser surgery. Although Dr. Everett knew that firms in Canada had several inherent cost advantages, including a favorable exchange rate and regulatory environment, he could not understand how they could undercut PCLI's price so much without compromising service quality.

PCLI was a privately held company that operated a total of 11 clinics throughout the northwestern United States and provided a range of medical and surgical eye treatments including laser vision correction. Responding to the challenge of the Canadian competitors was one of the points that would be discussed when Dr. Everett and the other clinic coordinators and surgeons who ran PCLI met next month to discuss policies and strategy. Dr. Everett strongly believed that the organization's success was based on surgical excellence and compassionated concern for its

This case was prepared by the authors for the sole purpose of providing material for class discussion. It is not intended to illustrate either effective or ineffective handling of a managerial situation. The authors thank Dr. Mark Everett for his cooperation and assistance with this project. The authors also thank the anonymous *Case Research Journal* reviewers and the anonymous North American Case Research Association 2000 annual meeting reviewers for their valuable input and suggestions.

Paid-in-full members of NACRA are encouraged to reproduce any case for distribution to their students without charge or written permission. All other rights reserved jointly to the authors and the North American Case Research Association.

Copyright © 2002 by the *Case Research Journal* and John J. Lawrence and Linda J. Morris.

patients and the doctors who referred them. PCLI strived to provide the ultimate in patient care and consideration. Dr. Everett had joined PCLI in 1993 in large part because of how impressed he had been at how PCLI treated its patients, and he remained committed to this patient-focused value.

He was concerned, however, about his organization's ability to attract laser vision correction patients. He knew that many prospective PCLI customers would be swayed by the low prices and would travel to Canada to have the procedure performed, especially because most medical insurance programs covered only a small portion of the cost of this procedure. Dr. Everett believed strongly that PCLI achieved better results and provided a higher quality service experience than the clinics in Canada offering low-priced LASIK procedures. He also felt PCLI did a much better job of helping potential customers determine which of several procedures, if any, best met the customers' long-term vision needs. Dr. Everett wondered what PCLI should do to win over these potential customers—both for the good of the customers and for the good of PCLI.

PACIFIC CATARACT AND LASER INSTITUTE

Pacific Cataract and Laser Institute (PCLI) was founded in 1985 by Dr. Robert Ford and specialized in medical and surgical eye treatment. The company was headquartered in Chehalis, Washington, and operated clinics in Washington, Oregon, Idaho, and Alaska. (Exhibit 1 shows a map of PCLI locations.) In addition to laser vision correction, PCLI provided cataract surgery, glaucoma consultation and surgery, corneal transplants, retinal care and surgery, and eyelid surgery. Dr. Ford founded PCLI on the principle that doctors must go beyond science and technology to practice the art of healing through the Christian principles of love, kindness, and compassion. The organization had defined eight core values that were based on these principles. These core values, shown in Exhibit 2, guided PCLI's decision making as it attempted to fulfill its stated mission of providing the best possible "comanaged" services to the profession of optometry.

Comanagement involved PCLI working closely with a patient's optometrists, or OD (for doctor of optometry). In comanaged eye care, family ODs were the primary care eye doctors who diagnosed, treated, and managed certain diseases of the eye that did not require surgery. When surgery was needed, the family OD referred patients to ophthalmologists (e.g., PCLI's eye surgeons) for specialized treatment and surgery. Successful comanagement, according to PCLI, depended upon a relationship of mutual trust and respect built through shared learning, constant communication and commitment to providing quality patient care. PCLI's comanagement arrangements did not restrict ODs to working with just PCLI, although PCLI sought out ODs who would use PCLI as their primary surgery partner and who shared PCLI's values. Many ODs did work exclusively with PCLI unless a specific patient requested otherwise. PCLI-Spokane had developed a network of 150 family ODs in its region.

PCLI operated its eleven clinics in a very coordinated manner. It had seven surgeons that specialized in the various forms of eye surgery. These surgeons, each accompanied by several surgical assistants, traveled from center to center to perform specific surgeries. The company owned two aircraft that were used to fly the surgical teams between the centers. Each clinic had a resident optometric physician who served as that clinic's coordinator and essentially managed the day-to-day operations of the clinic. Each clinic also employed its own office support staff. PCLI's

EXHIBIT 1 Map Showing PCLI Clinic Locations
(Clinics designated by a ♦; Anchorage, Alaska, clinic not shown)

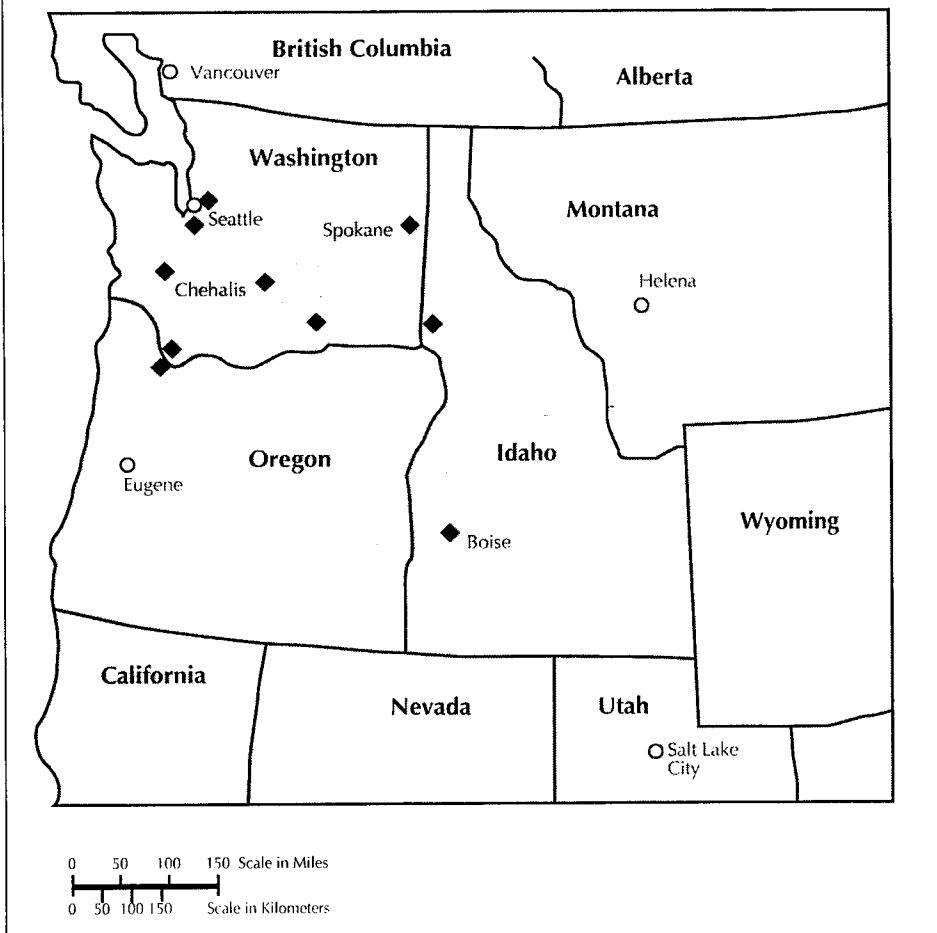


EXHIBIT 2 Pacific Cataract and Laser Institute's Core Values

- We believe patients' families and friends provide important support, and we encourage them to be as involved as possible in our care of their loved ones.
- We believe patients and their families have a right to honest and forthright medical information presented in a manner they can understand.
- We believe that a calm, caring, and cheerful environment minimizes patient stress and the need for artificial sedation.
- We believe that all our actions should be guided by integrity, honesty, and courage.
- We believe that true success comes from doing the right things for the right reasons.
- We believe that efficient, quality eye care is provided best by professionals practicing at the highest level of their expertise.
- We believe that communicating openly and sharing knowledge with our optometric colleagues is crucial to providing outstanding patient care.
- We believe that the ultimate measure of our success is the complete satisfaction of the doctors who entrust us with the care of their patients.

main office in Chehalis, Washington, also employed patient counselors who worked with the referring family ODs for scheduling the patient's surgery and a finance team to help patients with medical insurance claims and any financing arrangements (which were made through third-party sources). Dr. Everett was the Spokane clinic's resident optometric physician and managed the day-to-day activities to that clinic. Actual surgeries were performed in the Spokane clinic only one or two days a week, depending upon demand and the surgeons' availability.

LASER EYE SURGERY AND LASIK

Laser eye surgery was performed on the eye to create better focus and lessen the patient's dependence on glasses and contact lenses. Excimer lasers were the main means of performing this type of surgery. Although research on the excimer laser began in 1973, it was not until 1985 that excimer lasers were introduced to the ophthalmology community in the United States. The FDA approved the use of excimer lasers for photorefractive keratectomy (PRK) in October 1995 for the purpose of correcting nearsightedness. PRK entailed using computer-controlled beams of laser light to permanently resculpt the curvature of the eye by selectively removing a small portion on the outer top surface of the cornea (called *epithelium*). The epithelium naturally regenerated itself, although eye medication was required for 3 to 4 months after the procedure.

In the late 1990s, laser in-situ keratomileusis, or LASIK, replaced PRK as the preferred method to correct or reduce moderate to high levels of nearsightedness (i.e., myopia). The procedure required the surgeon to create a flap in the cornea using a surgical instrument called a *microkeratome*. This instrument used vacuum suction to hold and position the cornea and a motorized cutting blade to make the necessary incision. The surgeon then used an excimer laser to remove a microthin layer of tissue from the exposed, interior corneal surface (as opposed to removing a thin layer of tissue on the outer surface of the cornea as was the case with PRK). The excimer laser released a precisely focused beam of low temperature, invisible light. Each laser pulse removed less than one hundred-thousandth of an inch. After the cornea had been reshaped, the flap was replaced. The actual surgical procedure took only about 5 minutes per eye. LASIK surgery allowed a patient to eliminate the regular use of glasses or contact lenses although many patients still required reading glasses.

Although LASIK used the same excimer laser that had been approved for other eye surgeries in the United States by the Ophthalmic Devices Panel of the FDA, it was not an approved procedure in the United States, but was under study. LASIK was offered by clinics in the United States, but was considered an "off-label" use of the laser. "Off label" was a phrase given to medical services and supplies that had not been thoroughly tested by the FDA, but which the FDA permitted to be performed and provided by a licensed medical professional. Prescribing aspirin as a blood thinner to reduce the risk of stroke was another example of an off-label use of a medical product—the prescribing of aspirin for this purpose did not have formal FDA approval but was permitted by the FDA.

The LASIK procedure was not without some risks. Complications arose in about 5 percent of all cases, although experienced surgeons had complication rates of less than 2 percent. According to the American Academy of Ophthalmology, complications and side effects included irregular astigmatism, resulting in a decrease in best corrected vision; glare; corneal haze; overcorrection; undercorrection; inabil-

ity to wear contact lenses; loss of the corneal cap, requiring a corneal graft; corneal scarring and infection; and in an extremely rare number of cases, loss of vision. If lasering were not perfect, a patient might develop haze in the cornea. This could make it impossible to achieve 20/20 vision, even with glasses. The flap could also heal improperly, causing fuzzy vision. Infections were also occasionally an issue.

Although PRK and LASIK were the main types of eye surgery currently performed to reduce a patient's dependence on glasses or contact lenses, there were new surgical procedures and technologies that were in the test stage that could receive approval in the United States within the next 3 to 10 years. These included intraocular lenses that were implanted behind a patient's cornea, laser thermokeratoplasty (LTK) and conductive keratoplasty (CK) that used heat to reshape the cornea, and "custom" LASIK technologies that could better measure and correct the total optics of the eye. These newer methods had the potential to improve vision even more than LASIK, and some of these new processes also might allow additional corrections to be made to the eye as the patient aged. Intraocular lenses were already widely available in Europe.

LASIK MARKET POTENTIAL

The market potential for LASIK procedures was very significant, and the market was just beginning to take off. According to officials of the American Academy of Ophthalmology, over 150 million people wore glasses or contact lenses in the United States. About 12 million of these people were candidates for current forms of refractive surgery. As procedures were refined to cover a wider range of vision conditions, and as the FDA approved new procedures, the number of people who could have their vision improved surgically was expected to grow to over 60 million. As many as 1.7 million people in the United States were expected to have some form of laser eye surgery during 2000, compared to 500,000 in 1999 and 250,000 in 1998. Laser eye repair was the most frequently performed surgery in all of medicine.

Referrals were increasingly playing a key role in the industry's growth. Surgeons estimated that the typical patient referred five friends and that as many as 75 percent of new patients had been referred by a friend. A few employers were also beginning to offer laser eye surgery benefits through managed care vision plans. These plans offered discounts from list prices of participating surgeons and clinics to employees. Vision Service Plan's (VSP) partners, for example, gave such discounts and guaranteed a maximum price of \$1,800 per eye for VSP members. The number of people eligible for such benefits was expected to grow significantly in the coming years. PCLI did not participate in these plans and did not offer such discounts.

LASIK AT PCLI

The process of providing LASIK surgery to patients at PCLI began with the partnering OD. The OD provided the patient with information about LASIK and PCLI, reviewed the treatment options available, and answered any questions the patient might have concerning LASIK or PCLI. If a patient was interested in having the surgery performed, the OD performed a pre-exam to make sure the patient was a suitable candidate for the surgery. Assuming the patient was able to have the surgery, the OD made an appointment for the patient with PCLI and forwarded the results of the pre-exam to Dr. Everett. PCLI had a standard surgical fee of \$1,400 per eye for LASIK. Each family OD added on additional fees for pre- and

postoperative exams depending on the number of visits per patient and the OD's costs. Most of the ODs charged \$700 to \$1,200, making the total price of laser surgery to the patient between \$3,500 and \$4,000. This total price rather than two separate service fees was presented to the patient.

Once a patient arrived at PCLI, an ophthalmic assistant measured the patient's range of vision and took a topographical reading of the eyes. Dr. Everett would then explain the entire process to the patient, discuss the possible risks, and have the patient read and sign an informed consent form. The patient would then meet the surgeon and have any final questions answered. The meeting with the surgeon was also intended to reduce any anxiety that the patient might have regarding the procedure. The surgical procedure itself took less than 15 minutes to perform. After the surgery was completed, the patient was told to rest his/her eyes for a few hours and was given dark glasses and eyedrops. The patient was required to either return to PCLI or to his or her family OD 24 hours after their surgery for a follow-up exam. Additional follow-up exams were required at 1 week, 1 month, 3 months, 6 months, and 1 year to make sure the eyes healed properly and to insure that any problems were caught quickly. The patient's family OD performed all of these follow-up exams.

Three of PCLI's seven surgeons specialized in LASIK and related procedures. The company's founder, Dr. Robert Ford, had performed over 16,000 LASIK procedures during his career, more than any other surgeon in the Northwest. His early training was as a physicist, and he was very interested in and knowledgeable about the laser technology used to perform LASIK procedures. Because of this interest and understanding, Dr. Ford was an industry innovator and had developed a number of procedural enhancements that were unique to PCLI. Dr. Ford had developed an enhanced software calibration system for PCLI's lasers that was better than the system provided by the laser manufacturers.

More significantly, Dr. Ford had also developed a system to track eye movements. Using superimposed live and saved computer images of the eye, PCLI surgeons could achieve improved eye alignment to provide more accurate laser resculpting of the eye. Dr. Ford was working with Laser Sight, a laser equipment manufacturer developing what PCLI and many others viewed as the next big technological step in corrective eye surgery—custom LASIK. Custom LASIK involved developing more detailed corneal maps and then using special software to convert these maps into a program that would run a spot laser to achieve theoretically perfect corrections of the cornea. This technology was currently in clinical trials in an effort to gain FDA approval of the technology, and Dr. Ford and PCLI were participating in these trials. Although Dr. Ford was on the leading edge of technology and had vast LASIK surgical experience, very few of PCLI's patients were aware of his achievements.

COMPETITION

PCLI in Spokane faced stiff competition from clinics in both the United States and Canada. There were basically three types of competitors. There were general ophthalmology practices that also provided LASIK surgeries, surgery centers like PCLI that provided a range of eye surgeries, and specialized LASIK clinics that focused solely on LASIK surgeries.

General ophthalmology practices provided a range of services covering a patient's basic eye care needs. They performed general eye exams, monitored the

EXHIBIT 3 Eye Consultant's Advertisement

Special Offer

LASIK
\$1,195 PER
 EYE
 *

INCLUDING pre- and postoperative

WHEN: Thursday
 June 1

6:00 P.M.

WHERE: Clear Vision
 Laser Center
 Quail Run Office Park
 2200 E. 29th Avenue
 Suite 110

CALL TODAY
 Seating Is Limited

See LASIK Live!

Come to this free LIVE LASIK seminar
 to receive this special offer.

*ONLY for seminar attendees who
 schedule a procedure within 90 days!

Compare our Quality ~ Compare our Price
Save \$600 on Both Eyes!

The Doctors You Trust
 for Excellence
 in Local Eye Care

EYE CONSULTANTS

David Cohen, M.D.

Chris Sturbaum, M.D. CALL XXX-XXXX

health of patients' eyes, and wrote prescriptions for glasses and contact lenses. Most general ophthalmology practices did not perform LASIK surgeries (or any other types of surgeries) because of the high cost of the equipment and the special training needed to perform the surgery, but a few did. These clinics were able to offer patients a continuity of care that surgery centers and centers specializing solely in LASIK surgeries could not. Customers could have all pre- and postoperative exams performed at the same location by the same doctor. In the Spokane market, a clinic called Eye Consultants was the most aggressive competitor of this type. This organization advertised heavily in the local newspaper, promoting an \$1,195 per eye price (Exhibit 3). The current newspaper promotion invited potential customers to a free LASIK seminar put on by the clinic's staff, and seminar attendees who chose to have the procedure qualified for the \$1,195 per eye price, which was a \$300 per eye discount from the clinic's regular price.

Surgery centers did not provide for patients' basic eye care needs, but rather specialized in performing eye surgeries. These centers provided a variety of eye surgeries,

including such procedures as cataract surgeries and LASIK surgeries in addition to other specialty eye surgeries. PCLI was this type of clinic. The other surgery center of this type in the Spokane area was Empire Eye. PCLI viewed Empire Eye as its most formidable competitor in the immediate geographic area. Empire Eye operated in a similar way as PCLI. It relied heavily on referrals from independent optometric physicians, did not advertise aggressively, and did not attempt to win customers with low prices. It did employ a locally based surgeon who performed its LASIK procedures, although this surgeon was not nearly as experienced as Dr. Ford at PCLI.

LASIK clinics provided only LASIK or LASIK and PRK procedures. They did not provide for general eye care needs nor did they provide a range of eye surgeries like surgery centers. These clinics generally had much higher volumes of LASIK patients than general ophthalmology or surgery centers, allowing them to achieve much higher utilization of the expensive capital equipment required to perform the surgeries. The capital cost of the equipment to perform the LASIK procedure was about US\$500,000.

The largest of these firms specializing in LASIK surgeries was TLC Laser Eye Centers, Inc. TLC was based in Mississauga, Ontario, and had 56 clinics in the United States and 7 in Canada. During the first quarter of 2000, TLC generated revenues of US\$49.3 million by performing 33,000 surgeries. This compared with first quarter of 1999 when the company had revenues of US\$41.4 million on 25,600 procedures. TLC was the largest LASIK eye surgery company in North America and performed more LASIK surgeries in the United States than any other company. The closest TLC centers to Spokane were in Seattle, Washington, and Vancouver, British Columbia. The second largest provider of LASIK surgeries in the United States was Laser Vision Centers (LVC), based in St. Louis, Missouri. Its closest center to Spokane was also in Seattle.

Almost all of the Canadian competitors that had been successful at attracting U.S. customers were clinics that specialized solely in LASIK surgeries. The largest Canadian competitor was Lasik Vision Corporation (LVC), based in Vancouver, British Columbia. LVC operated 15 clinics in Canada and 14 in the United States, and was growing rapidly. LVC had plans to add another 21 clinics by the end of 2000. During the first quarter of 2000, LVC generated revenues of US\$20.1 million by performing 26,673 procedures. This compared to first quarter of 1999, when the company had revenues of only US\$4.3 million on 6,300 procedures.

In total, there were 13 companies specializing in providing LASIK surgeries in British Columbia, mostly in the Vancouver area. One of the British Columbia firms that advertised most aggressively in the Spokane area was Lexington Laser Vision (LLV). LLV operated a single clinic staffed by nine surgeons and equipped with four lasers. The clinic scheduled surgeries 6 days a week and typically had a 2-month wait for an appointment.

The service design process at LLV was designed to accommodate many patients and differed significantly from PCLI's service process. To begin the process, a patient simply called a toll-free number for LLV to schedule a time to have the surgery performed. Once the patient arrived at the LLV clinic, he or she received a preoperative examination to assess the patient's current vision and to scan the topography of the patient's eyes. The next day, the patient returned to the clinic for the scheduled surgery. The typical sequence was to first meet with a patient counselor who reviewed with the patient all pages of a LASIK information booklet that had been sent to the patient following the scheduled surgery date. The patient counselor

answered any questions the patient had regarding the information in the booklet and ensured that the patient had signed all necessary surgical consent forms. Following this step, a medical assistant surgically prepped the patient and explained the postcare treatment of the eyes. After this preparation, the surgeon greeted the patient, reviewed the topographical eye charts with the patient, explained the recommended eye adjustments for the patient, and reiterated the surgical procedure once again. The patient would then be transferred to the surgery room, where two surgical assistants were available to help the doctor with the 5- to 10-minute operation. Once the surgery was completed, a surgical assistant led the patient to a dark, unlit room so that the patient's eyes could adjust. After a 15-minute waiting period, the surgical assistant checked the patient for any discomfort and repeated the instructions for postcare treatment. Barring no problems or discomfort, the surgical assistant would hand the patient a pair of dark, wraparound sunglasses with instructions to avoid bright lights for the next 24 hours. At the scheduled postoperative exam the next day, a medical technician measured the patient's corrected vision and scheduled any additional postoperative exams. If desired, the patient could return to the clinic for the 1-week, 1-month, and 3-month postoperative exams at either the LLV clinic or one of the U.S.-based partner clinics of LLV. In some cases, the patient might opt to have these postoperative exams performed by his or her family OD.

U.S. patients traveling to LLV or the other clinics in British Columbia to have the surgery performed needed to allow for 3 days and 2 nights for the surgery. A pre-exam to insure the patient was a suitable candidate for the surgery was performed the first day, the surgery itself was performed the second day, and the 24-hour postexam was performed on the third day. Two nights in a hotel near LLV cost approximately US\$100, and airfare to Vancouver, British Columbia, Canada cost approximately US\$150 from Spokane, Washington. Lexington Laser Vision had a sister clinic in the Seattle area where patients could go for postoperative exams. LLV requested patients to undergo follow-up exams at 1 week, 1 month, and 3 months. These exams were included in the price as long as the patient came to either the Seattle or Vancouver clinics. Some patients outside of the Seattle/Vancouver area arranged with their family ODs to perform these follow-ups at their own expense to avoid the time and cost of traveling to Seattle or Vancouver, British Columbia.

A breakdown of the estimated cost structure for each of these different competitors is shown in Exhibit 4. Dr. Everett believed that both Eye Consultants and LLV were probably incurring losses. Both were believed to be offering below-cost pricing in response to the significant price competition going on in the industry. Eye Consultants was also believed to be offering below-cost pricing in order to build volume and gain surgeon experience. PCLI's own cost structure was fairly similar to Empire Eye's cost structure, as both operated in a similar fashion.

THE CANADIAN ADVANTAGE

LASIK clinics operating in Canada had a number of advantages that allowed them to charge significantly less than competitors in the United States. First, the Canadian dollar had been relatively weak compared to the U.S. dollar for some time, fluctuating between C\$1.45 per U.S. dollar and C\$1.50 per U.S. dollar. This exchange rate compared to rates in the early 1990s that fluctuated between C\$1.15 per U.S. dollar and C\$1.20 per U.S. dollar. On top of this, the inflation rate in Canada averaged only 1.5 percent during the 1990s compared to 2.5 percent in the

EXHIBIT 4 LASIK-Related Revenue and Cost Estimates for PCLI's Competitors (All Figures Are in US\$) ^a				
Competitor	Eye Consultants	Empire Eye	TLC Clinic	Lexington Laser Vision^b
Type of Operation	General Ophthalmology Practice	Eye Surgery Center	Specialized LASIK Clinic	Specialized LASIK Clinic
Location of Operation	Spokane, WA	Spokane, WA	Seattle, WA	Vancouver, B.C.
Number of Procedures/Year	600	1,000	4,000	10,000
Price to Customer, per Eye	\$1,195	\$1,900	\$1,600	\$500
Estimated Revenues	717,000	\$1,900,000	\$6,400,000	\$5,000,000
Estimated Expenses				
Payments for Pre- and Postoperative Care ^c	120,000	450,000	1,400,000	1,500,000
Royalties	150,000	250,000	1,000,000	0
Surgeon's Fees/Salary	120,000	300,000	1,200,000	1,500,000
Medical Supplies	30,000	50,000	200,000	500,000
Laser Service	100,000	100,000	200,000	400,000
Depreciation	125,000	125,000	250,000	500,000
Marketing	75,000	75,000	400,000	500,000
Overhead	200,000	350,000	500,000	600,000
Total Annual Expenses	\$925,000	\$1,700,000	\$5,150,000	\$5,500,000

^aThis table was developed based on a variety of public sources on both the LASIK industry in general and on individual competitors. In a number of cases, the figures represent aggregated "estimates" of data from several sources. Estimated expenses are based largely, but not entirely, on discussion of the LASIK industry cost structure provided in "Eyeing the Bottom Line: Just Who Profits from Your Laser Eye Surgery May Surprise You," by James Pethokoukis, *U.S. News & World Report*, March 30, 1998, pp. 80-82.

^bThis cost structure was thought to be typical of all of the specialized LASIK clinics located in British Columbia, Canada, that competed with PCLI.

^cIn some cases, these costs are paid directly by the patient to the postoperative care provider; they have been included here because they represent a part of the total price paid by the customer.

United States. This dual effect of a weakened Canadian dollar combined with somewhat higher inflation in the United States meant that Canadian providers had, over time, acquired a significant exchange rate cost advantage.

Second, laser surgery equipment manufacturers charged a \$250 patent royalty fee for each surgery (i.e., each eye) performed in the United States. The legal system in Canada prevented equipment manufacturers from charging such a royalty every time a surgery was performed, amounting to a \$500 cost savings per patient for Canadian clinics. Competitive pressure among surgery equipment manufacturers had caused this fee to drop in recent months to as low as \$100 for certain procedures performed on some older equipment in the United States, giving U.S. clinics some hope that this cost disadvantage might decrease over time.

Third, clinics in the United States generally paid higher salaries or fees to surgeons and support staff than did their Canadian rivals. The nationalized health system in Canada tended to limit what doctors in Canada could earn compared to their peers in the United States. LASIK clinics themselves were not part of the Canadian national health system because they represented elective surgeries. However, Canadian LASIK clinics could pay their surgeons a large premium over what they could make in the nationalized system, but this was still significantly less than a comparable surgeon's earnings in the United States. This cost differential extended

to the referring optometrists who provided pre- and postoperative exams and whose fees were typically included in the price quoted to customers. Many Canadian clinics relied more heavily on advertising and word-of-mouth customer referral rather than referrals from optometrists and de-emphasized pre- and postoperative exams.

Fourth, there was some speculation among U.S. clinics that some low-priced Canadian clinics were making a variety of care-compromising quality trade-offs, such as not performing equipment calibration and maintenance as frequently as recommended by the equipment manufacturers and reusing the microkeratome blades used to make the initial incision in the cornea. Canadian clinics denied that the choices that they made compromised the quality of care received by the patient. Finally, it seemed clear to Dr. Everett that Canadian providers were in the midst of a price war and that at least some of the clinics were not generating any profit at the prices they were charging.

Canadian providers also had significant noncost advantages. Because of differences in the approval process of medical equipment and procedures, laser eye surgery technologies were often available in Canada before they became readily available in the United States. Approval of new medical technologies in Canada was often based on evidence from other countries that the technology was safe, whereas approval of new medical technologies in the United States required equipment manufacturers to start from scratch with a series of studies. As a result of this, and combined with the volume that the Canadian clinics' low prices generated, many Canadian clinics had more experience with laser eye surgery than comparable clinics in the United States. Experience was a critical factor in a clinic or specific surgeon having low rates of complications. Further, the differences in the approval processes between the countries allowed Canadian providers the ability to offer advanced equipment not yet available in the United States. For example, the FDA approved the first generation of excimer laser for use in the United States in October 1995. No centers in Canada, however, had purchased this particular laser since 1995 because more advanced versions of the technology had become available for use in Canada. Although some of these equipment advances have had minimal impact on the results for the average patient, they have, at the very least, provided Canadian clinics a marketing advantage.

U.S. COMPETITORS' RESPONSES TO THE CANADIAN CHALLENGE

The surgeons and staff at PCLI knew from reading a variety of sources and from following changes in the industry that most U.S.-based clinics were experiencing some loss of customers to Canadian competitors. These companies were responding in a variety of ways in an attempt to keep more patients in the United States. One company in the industry, LCA, had created a low-priced subsidiary, LasikPlus, as a way to compete with lower priced competitors in Canada. LasikPlus had facilities in Maryland and California and charged \$2,995 compared to the \$5,000 price charged by the parent company's LCA Vision Centers. One way that the LasikPlus subsidiary had cut cost was by employing its own surgeons. Regular LCA Vision Centers provided only the facilities and equipment, and contracted out with independent surgeons to perform the procedures.

Another strategy that U.S. firms were using to compete was to partner with managed care vision benefits firms, HMOs, and large businesses. TLC Laser Eye Centers had been the most aggressive at using this strategy. It had partnered with

Vision Service Plan (VSP) to provide the surgery to VSP members at a \$600 discount and had partnered with HMO Kaiser Permanente to provide Kaiser members a \$200 discount. TLC was also attempting to get employers to cover part of the cost for their employees and was letting participating companies offer a \$200 discount on the procedure to their employees. Over 40 businesses had signed up by late 1999, including Southern California Edison, Ernst & Young, and Office Depot. TLC was not the only provider pursuing this strategy. LCA Vision centers had partnered with Cole Managed Vision to provide the surgery to Cole members at a 15 percent discount.

One of the significant advantages that U.S. providers had over their Canadian competitors was convenience, because patients did not have to travel to Canada to have the procedure performed. Most facilities providing the surgery in the United States, however, were located in major metropolitan areas, which may not be seen as being all that much more convenient for potential patients living in smaller communities and rural areas. One competitor had taken this convenience a step further. Laser Vision Centers was using mobile lasers to bring greater convenience to patients living in these smaller communities. It used a patented cart to transport the laser to ophthalmologists' offices, where it could be used for a day or two by local surgeons. LVC could also provide a surgery team in locations where no surgeons were qualified to perform the procedure. The company was serving patients in over 100 locations in this manner and was expanding its efforts.

Technological or procedural advances offered clinics another basis upon which to compete. For example, during the summer of 1999, Dr. Barrie Soloway's clinic was the first in the United States to get an Autonomous laser. This laser was designed to overcome a major problem in eye surgery, the tendency for the eye to move while the procedure was being performed. In an interview with *Fortune* magazine, Autonomous's founder, Randy Frey, described the advantages of this new technology.

At present, doctors stabilize the eye merely by asking the patient to stare at a blinking red light. But, says Frey, aiming a laser at the eye is "a very precise thing. I couldn't imagine that you could make optics for the human eye while the eye was moving." The eye, he explains, makes barely perceptible, involuntary movements about five times a second. This "saccadic" motion can make it difficult to get a perfectly smooth correction. "The doctor can compensate for the big, noticeable movements," Frey says, "but not the little ones."

Frey's machine uses radar to check the position of the eye 4,000 times a second. He's coupled this with an excimer laser whose beam is less than 1 millimeter in diameter versus 6 millimeters for the standard beam. Guided by the tracker, this laser ablates the cornea in a pattern of small overlapping dots. (Murray, 1999)

There were a number of technological advances under development like the autonomous laser system that could have a significant impact on this industry. With approvals for new procedures generally coming more quickly in Canada than the United States, however, it was unclear whether technological advances could help U.S. providers differentiate themselves from their Canadian competitors.

THE UPCOMING STRATEGY AND POLICY MEETING

Every time Dr. Everett saw an exuberant patient after surgery, or read a letter of gratitude from a patient, he knew in his heart that they were doing something spe-

EXHIBIT 5 Pacific Cataract and Laser Institute Advertisement



The question I asked my eye doctor was
"Who would you trust to treat your eyes?"

www.pcli.com
(509) XXX-XXXX
(800) XXX-XXXX

Thinking About LASIK?

Ask your optometrist
first.

The reason is simple. Excellent visual results are highly dependent on the skill of the surgeon you select.

Optometrists – also known as optometric physicians – do not perform surgery. However, these doctors provide most of the after-surgery care. This gives them the unique opportunity to see firsthand the good and not-so-good outcomes of numerous surgeons.

Your optometrist can guide you to a surgeon who consistently obtains excellent results and is appropriate for your type of correction.

The results of surgery last a lifetime. See your optometric physician!

LASER VISION CORRECTION

PACIFIC CATARACT AND LASER INSTITUTE

SPOKANE YAKIMA KENNEWICK TACOMA BELLEVUE CHEHALIS VANCOUVER, WA BOISE LEWISTON PORTLAND ANCHORAGE

cial. He was energized by the fact that the laser vision corrections they were performing were changing peoples' lives. He was also proud of the fact that they continued to treat all of their customers as special guests. However, he knew that for every LASIK patient they saw at PCLI, there was another potential PCLI patient who went to Canada to have the surgery performed. PCLI had the capacity to do more laser vision correction surgeries in Spokane than they were currently doing, and he wanted to make use of that capacity. He felt both PCLI and prospective patients from Spokane and the surrounding communities would be better off if more of these patients chose PCLI for laser vision correction surgeries.

However, Dr. Everett was not sure what, if anything, should change at PCLI to attract these potential customers. PCLI had already begun to advertise. Advertising, in general, was not a commonly used practice in the U.S. medical community, and some in the medical profession considered much of the existing advertising in the industry to be ethically questionable. Although Dr. Everett was comfortable with the advertisements they had started running three months ago (Exhibit 5), he was still unsure whether PCLI should be advertising at all. More importantly, he felt

that advertising represented only a partial solution, at best. What was needed was a clear strategic focus for the organization that would help it respond to the Canadian challenge.

One obvious answer was to also compete on price; however, he simply could not conceive of PCLI treating eye surgery like a commodity and competing solely on price. Such a strategy seemed inconsistent with PCLI's core values, unwise from a business standpoint because PCLI's operating costs were much higher than its Canadian competitors, and simply wrong from an ethical standpoint. The problem was, he was not sure what strategic focus PCLI should pursue in order to retain its strong position in the Pacific Northwest LASIK market. What he did know was that whatever this strategy was to be, it needed to emerge from next month's meeting, and he wanted to be prepared to help make that happen. He wanted to have a clear plan to bring to the table at this meeting to share with his colleagues, even if it was simply a reaffirmation to continue doing what they were currently doing.