

Laser Vision Centers, Inc.
(LVCI - NASDAQ)

Recent Price ¹	\$7.625	Market Cap (\$ Million)	67.2
52-week Range	\$4.94 - \$12.25	Cash (\$ Million; 1/31/97)	4.16
Shares Outstanding ¹	8.815 million	Cash/Share	\$0.47
Institutional Ownership	≈ 10 percent	Technology value/share	\$7.12
Insider ownership	≈ 30 percent	Analyst ratings:	1 Buy 1 Hold
		Mkt. Cap/LTM Revenues:	9.6
FY'96 Revenues (\$ Million)	3.92	P/E	N.A.
FY'96 EPS	(\$1.67)	FYE	April
FY'97E EPS (Zacks, First Call)	(\$1.05)	Founded	1989
IPO price/date	N.A./Apr. 1991		<u>Since:</u>
Accumulated Deficit	\$23.2 Million	COB/CEO: John ("Jack") Klobnak	1989
9MYTD Cash Burn	\$5.2 Million	CFO: Charles Bono October 1992	
Years Covered by Cash (pre-\$)	≈ 0.8 Year	COO: Jim Wachtman	May 1996
Latest Product to Market	March 1997		

¹ Source: Laser Vision, S&P Comstock, June 27, 1997

	(\$000)							
	3rd Quarter		2nd Quarter		9 MYTD		FYE	
	IAN97	IAN96	OCT96	OCT95	IAN97	IAN96	96	95
Revenues	2,009	852	1,928	960	5,439	2,584	3,918	3,311
Net Income/(Loss)	(2,333)	(1,586)	(2,136)	(1,450)	(6,761)	(4,124)	(8,803)	(3,297)
EPS	(0.26)	(0.32)	(0.25)	(0.30)	(0.83)	(0.76)	(1.75)	(0.82)
Shares O/S	8,811	4,935	8,537	4,820	8,294	5,412	5,278	4,001

Note: Founded in 1989 as a medical marketing and advertising firm, Laser Vision entered its current business in 1991. The Company had approximately 55 employees at April 1997. Of these, four were based in Canada and 11 were based in Europe. Also, Alan Gillam was President since 1993 until his departure in June 1997. No replacement is planned.

OVERVIEW

Laser Vision Centers, Inc. ("Laser Vision" or the "Company") started by providing medical advertising and marketing services to ophthalmologists. In 1991, the Company shifted strategy and acquired its first excimer laser (≈ \$500,000) while establishing a clinical center in order to participate in ongoing clinical trials for photorefractive keratectomy (PRK). PRK is an FDA-approved procedure to correct nearsightedness (myopia). *Laser Vision facilitates access by patients and ophthalmologists to laser-based refractive surgery.* Using fixed site and mobile lasers, it makes capital-intensive lasers available to physicians with practices too small to justify the up-front costs. The Company charges the physician a \$500 to \$800 fee, depending on the access model used, for each eye treated.

THE INDUSTRY

The eye focuses light using two structures, the cornea and lens. Approximately 90 percent of focusing is *passively* provided by the cornea by virtue of its curvature. If it is too tightly curved, the individual sees near objects clearly but cannot easily see distant objects. This is called myopia or nearsightedness. The converse is hyperopia or farsightedness and is due to too flat a cornea. *Active*, fine focusing is accomplished by the lens. Eye care is an \$18 billion industry in the U.S. handled by approximately 17,000 ophthalmologists (M.D.s specialized in eye care) and 29,000 optometrists (lacking medical degrees). Approximately \$13 billion is spent on vision correction, including doctor visits, annual testing etc. In 1995, approximately \$3.8 billion was spent on glasses and contacts.

Bending light is called refraction and corrective lenses (eyeglasses, contacts) bend light to counteract flawed vision. Refractive surgery alters the curvature of the cornea, possibly obviating the need for glasses. Refractive surgery does not involve the lens. There are roughly three types of refractive surgery performed in the U.S. The first is called radial keratotomy (**RK**), used to treat myopia. RK is a surgical procedure in which spoke-like incisions are made around the cornea using a diamond scalpel. The healing process results in a flattened cornea. Surgical procedures do not require FDA clearance. First used broadly in 1990 (10,000 procedures), the technique expanded to over 300,000 procedures in 1994. Minor imprecision due to technique plus uncontrollable progressive flattening (possibly resulting in over-correction towards hyperopia) are common arguments raised against the technique. The method is relatively inexpensive (\approx \$500/eye) with little or no follow-up required.

Introduced outside of the U.S. in 1987, photorefractive keratectomy (**PRK**) uses a "cold" laser (excimer) to ablate (vaporize) the corneal surface. Ablating the top of a curved surface flattens it, to treat myopia; ablating an annulus on the cornea increases the curvature, to treat hyperopia. Summit Technology, Inc. (BEAM) was first to receive FDA approval for its laser in October 1995. In March 1996, VISX Inc. (VISX) was approved. Both approvals were very similar and both were only for myopia. In April 1997, VISX was FDA cleared to market its laser to treat astigmatism, localized corneal irregularities resulting in blurred vision. PRK costs about \$1,500/eye, requires several follow-up visits and entails some post-operative pain and discomfort, including blurred vision for two or three days. A laser treatment for hyperopia is currently in clinical trials sponsored by several companies.

The third and newest procedure (a variation of automated lamellar keratoplasty) is called laser in-situ keratomileusis (**LASIK**). LASIK involves making a surgical fillet of a thin flap of the cornea with a tiny motorized "cheese-slicer" (microkeratome), ablating the tissue beneath the flap, then refolding the flap back over the ablated tissue. In May 1996 the FDA wrote that LASIK is a "practice of medicine" that essentially combines two approved devices; thus it would not be regulated, but could not be promoted since the devices are used "off-label." Slightly more expensive than PRK at \$2,000 per eye, LASIK benefits include same day recovery, immediately clear vision, no pain and no required follow-up. Also, bilateral (both eyes) treatment during surgery is routine for many practices. LASIK is also superior to PRK for severe myopia.

A PRK or LASIK procedure performed by an experienced (\approx 50-100 eyes treated) ophthalmologist takes no more than 10-15 minutes. Many doctors will schedule each week's procedures for the same day at three per hour. Also, Laser Vision purchases VISX brand lasers almost exclusively, for which physicians have indicated a strong preference. The Company owns six older Summit lasers, has written off three and will write off the other three by calendar year end.

THE COMPANY

Founded by Jack Klobnak in St. Louis, Missouri, Laser Vision has evolved into an intermediary between laser manufacturers and ophthalmologists. Despite lofty projections by analysts about PRK adoption rates (by physicians and patients) prior to FDA approval, reality has proven brutal over the past year. Most estimates have been reduced by 50-75 percent from those made 18 months ago, but agreement is uniform that the market is genuine, large and that adoption rates could snowball within the next 12 months. Facilitating access by ophthalmologists to lasers could speed the process.

While more lasers in the field won't prompt patients to "walk-in" for a PRK, a physician with ten patients per month can not justify the purchase of a \$500,000 laser. Thus, actual revenues are lost and word-of-mouth advertising (critical to increased adoption) is non-existent. Laser Vision capitalizes on the physician's all-or-nothing dilemma by providing lasers part-time. The Company makes its 38 lasers available to physicians in four ways. Returns on investment for each access model average 30 percent, except for Owned Fixed Sites, which average 20 percent.

- Owned Fixed site: The Company leases a building, installs a laser and charges a physician a flat fee per treated eye. One optometrist, but no ophthalmologists, are hired. The Company's first laser was installed at its only U.S. facility in St. Louis, which is profitable. Laser Vision owns four other sites. This access model carries the highest overhead and requires approximately 75 eyes per month to reach operating breakeven. The Company nets approximately \$600 to \$800 per eye.
- Shared Fixed Site: Laser Vision has an exclusive agreement to provide lasers and related services to Columbia Healthcare's ambulatory surgery centers (ASC, a.k.a. "doc-in-a-box"). Eighteen centers are currently being served, but Laser Vision's plans to expand to more centers will await greater utilization than has been observed. Only 25 eyes per month are required to reach break-even, but Columbia's physicians ("employees") have yet to actively promote PRK or LASIK. The Company has indicated that it may redeploy some of Columbia's fixed site lasers into RO/RO systems (see below) should utilization rates not increase. The Company can net approximately \$500 per eye.
- Roll-on/Roll-off and MobilExcimer: The RO/RO access model is essentially a laser-on-wheels easily transported on a cushioned truck. It is set up in each doctor's office, usually for a day or two, then moved to another site. The MobilExcimer is a traveling, self-contained and fully operational laser surgery unit in which patients are treated. Physically larger than many surgical suites, it follows the model used for limited use, capital-intensive equipment access provided to rural communities. Examples include X-ray mammography, lithotripsy (kidney stones) and MRI (diagnostic imaging). Laser Vision currently serves over 70 sites in 28 states with its mobile units. The MobilExcimer is unique to Laser Vision and required FDA approval, which was received April 10, 1997. Twelve lasers are currently committed to mobile use. The Company is accelerating redeployment from fixed to mobile sites. The RO/RO access model breaks even at 35-40 eyes and has proven to be Laser Vision's most successful enterprise in terms of adoption by physicians and procedure growth. The MobilExcimer is still new, but the Company expects break even will occur at 45-50 eyes per month. In addition to \$500,000 for each laser, the RO/RO truck and dolly costs \$100,000. The MobilExcimer truck, manufactured by Calumet Coach under an exclusive contract, costs \$350,000. The Company expects to net approximately \$700 per eye from its MobilExcimer unit and \$640 per eye from its RO/RO units.

THE MARKET

In the U.S. there are approximately 60 million people with myopia. Due to age restrictions associated with the FDA-approved lasers, degree of myopia suitable for treatment and related clinical restrictions, approximately 90 percent of this population are candidates for PRK (65 percent) or LASIK (25 percent). However, since each patient bears the costs of the procedure (no insurance plan reimburses for "cosmetic" procedures), cost remains a significant barrier to widespread and rapid adoption. Another hurdle to adoption by patients is that glasses are familiar and work well. They are inexpensive, non-invasive and can address the vanity of wearers. Contact lenses work, are also relatively inexpensive and, in large part, were designed to address vanity issues. Corrective lenses may be confining to active individuals, one reason several sports figures have chosen PRK. A final barrier to acceptance is the perceived fear/risk of shining a *laser* in the eye. The actual risk is negligible (Oklahoma allows optometrists, with no medical training, to perform PRK); but, unlike lenses, PRK and LASIK are irreversible and cure (perfect vision without corrective lenses) can not be guaranteed.

Misperceptions by the public confirm that laser-based refractive surgery may be one of the most botched market introductions in history. Poor press about PRK use in Europe and an uncoordinated marketing program, nominally to be led by Summit and VISX using PPP (see below) revenues, have hindered patient adoption. High capital equipment costs, as always, have also slowed market penetration by lasers. In the U.S. by the end of 1996, there were approximately 350 lasers (220 from Summit, 130 from VISX) in use by fewer than the 3,000 ophthalmologists trained in PRK.

Pillar Point Partners

A relatively unique situation exists with respect to the patent estate for excimer laser treatments in ophthalmology. In January 1992, VISX and Summit settled a patent infringement case by jointly forming Pillar Point Partners (PPP). PPP charges a physician \$250 royalty for each eye treated. VISX receives \$140 and Summit receives \$110. Ophthalmologists strongly object to the PPP burden, but the fee has been consistently upheld in the courts and is likely to remain operative, near-term. For example, to date five laser manufacturers have become VISX licensees, each after some resistance.

Competition

VISX is a supplier to Laser Vision, not a direct competitor. However, to the extent that laser sales by VISX to ophthalmologists are deferred (and possibly never consummated) due to the success of Laser Vision's business model, there is a tension between the two companies. Laser Vision rarely purchases lasers from Summit (unless requested by Columbia's ASC physicians), the only other device with FDA approval. However, in 1996, Summit tried to establish laser access sites (vertical integration) using the fixed site model. Immediately viewed by *ophthalmologists* as competitive, Summit announced in January 1997 that it would abandon this approach and sell or spin off the business.

LCA Vision: Based in Cincinnati, Ohio, LCAV is a pure play competitor with a market capitalization of \$54 million with \$13 million in LTM revenues. The company operates 18 facilities in the U.S., Canada and Europe and treated its 10,000th eye in June 1997. LCAV claims that 98 percent of its patients reach 20/40 vision or better.

TLC, The Laser Centre: Traded on the Toronto exchange, 3tLZR is also a pure play competitor to Laser Vision. TLC acquired 20/20 Laser Centers and, in January, nine Summit centers for \$26 million.

Other potential competitors to Laser Vision include Beacon Laser Centers and Global Vision (private) and to a lesser extent due to their more diversified business focus, Staar Surgical (STAA), Sterling Vision (ISEE), Sight Resource Corporation (VISN) and Lasersight (LASE). In general, companies in this area trade at two-to-four times annual revenues.

Additional potential indirect competitors working on alternative or competitive technologies for refractive surgery include:

Keravision (KERA): In clinical development with an implantable corneal ring to treat myopia. Keravision began its pivotal clinical trial in December 1996. FDA approval is at least two years away.

Autonomous Technologies (ATCI): Developing a narrow beam excimer laser + eye motion tracker technology.

Chiron (CHIR), a biotechnology company, is collaborating with Germany-based Technolas on a clinical trial of PRK in the U.S. It is possible, though unlikely given each company's history, that they would enter the service business.

Investment Merits:

- Management Agility/Reputation with Ophthalmologists: Laser Vision's management have demonstrated a prescient ability to adapt to changes in the technology and provision of ophthalmic health care. Close relationships nurtured with ophthalmologists over the past 9 or 10 years have provided the Company with insights into this subsector's needs. For example, recognizing in 1991, too early in hindsight, that laser corrective surgery would be a growth industry, Laser Vision opened its St. Louis facility in order to participate in early clinical trials. Then, observing delays at FDA by VISX and Summit, the Company established operations in Canada and Europe. After FDA clearances, patient and physician acceptance fell behind projections and Laser Vision responded with its relatively unique mobile laser access approach. The majority of lasers purchased by Laser Vision are VISX systems, again based on the guidance of its ophthalmologist advisors.
- Market Forces: Ophthalmologists are entrepreneurial, rarely associating with hospitals. Currently, sixty percent of their revenues come from cataract surgery performed predominantly on a Medicare-reimbursed patient population. Many of these physicians believe that in the face of continued and significant price pressure from the Health Care Financing Administration (HCFA), their best alternative to building a practice is to identify an alternative, large market which is independent of mandated payment schedules. Laser corrective surgery is an ideal candidate.

Investment Risks:

- Market acceptance: As has been highlighted elsewhere in this report, capital-intensive lasers coupled with limited patient awareness and relatively significant out-of-pocket expenses have hindered physician and patient acceptance of laser corrective surgery. Another issue has been the uncoordinated and occasionally confrontational relationship between optometrists (who provide most diagnostic services) and ophthalmologists, who could treat (and might not return) a patient. Efforts by Laser Vision and others are being implemented to coordinate the "sharing-of-the-pie" in corrective surgery.
- Low Barrier to Entry: The laser service provider industry is fragmented and consolidating. The absence of technological barriers and preponderance of participants makes this environment competitive and possibly, cost driven. Laser Vision's mobile units provide low-cost leverage to its lasers, providing a *singular advantage* to the Company. In addition, initial physician acceptance of Laser Vision's services may lead to continued relationships in the form of fixed-site centers managed by the Company.
- Dependence on One Customer: In the fiscal first quarter of this year, over 50 percent of the laser eye treatments at Laser Vision's 22 U.S. centers were at the Minneapolis facility. This center is co-owned by the Company's Medical Director, Dr. Richard Lindstrom. Dr. Lindstrom is perhaps one of six "thought-leaders" in the field and is very highly respected by his peers. For example, two other thought leaders were present at a two-day tutorial and practicum (attended by ESS) organized by Laser Vision and presented by Dr. Lindstrom and his colleagues. In the subsequent two quarters, the Company has seen robust growth in the number of eyes treated at most sites, including Minneapolis (347 eyes in Q1, 422 in Q3), and a concomitant drop in the percentage of eyes treated in Minneapolis, from 52.0 percent in Q1 to 31.4 percent in Q3. Laser Vision has targeted Minneapolis to remain as its leading eye treatment site in fiscal 1998, but to reduce its treatment contribution to 15 percent by fiscal year end.

Fundamentally, Laser Vision is a leading player in the laser refractive surgery market. The Company offers a unique strength in its mobile laser access model, an outstanding reputation with its primary customers, ophthalmologists, and an experienced and knowledgeable management team. CEO Jack Klobnak and COO Jim Wachtman have positioned the Company to grow faster than the secular industry in the next 12 to 24 months.

Events to watch over next 12 months:

1. Laser Vision's Board has created financial incentives for senior management to hit operating break-even by calendar Q4 this year. Top line growth from both total "eye volume" and product mix (e.g., RO/RO versus Owned Fixed Site) will be important predictors going forward. Continued reduction in the percent of treated eyes from Minneapolis will be encouraging. Expense reduction to reach the B/E goal should be viewed negatively.
2. Possible Bausch & Lomb (BOL) Partnership: On May 30, 1997, the Company met with senior managers from Bausch & Lomb to exchange strategic directions and to discuss a possible investment in Laser Vision by B&L. A follow-up meeting with B&L's CFO was subsequently scheduled. Validation by a respected, strategic partner like B&L would constitute a strong endorsement of Laser Vision's business model and their competitive strength.
3. Columbia Health Care: The relationship has added only cosmetic, not strategic or financial value to Laser Vision's operations. Aggressive redeployment of fixed-site lasers at Columbia's ASC's or significantly improved treatment volumes at all centers would be positive. Continued sub-par performance will be a drag on the Company, overall. Adding more ASCs should also be viewed with skepticism.

Note: The information in this report originates from various sources. Some of the information was learned during a conference call with Company management on May 12, 1997, meetings held with senior management during a site visit on June 2, 1997, and a site visit to VISX headquarters on June 5, 1997. Also, ESS attended a two-day training session in LASIK attended by 30 ophthalmologists, each paying \$3,000, in Minneapolis on May 31 and June 1, 1997.

A lay review of laser refractive surgery appeared in the June 2, 1997 issue of Newsweek.