

LABORATORY



ECONOMICS

Competitive Market Analysis For Laboratory Management Decision Makers

WILL LAB TEST PRICING CHANGE IN CALIFORNIA?

California regulators have interpreted the state's "lowest comparable charge" rule to mean that labs must offer Medi-Cal their lowest wholesale fees charged to GPO, physician office and hospital clients. This means that Medi-Cal lab reimbursement will be cut, as opposed to the unlikely scenario of client bill prices being raised. "It's business as usual. Nobody is raising their prices," notes an independent lab executive from southern California who wishes to remain anonymous. Another lab exec in northern California tells *Laboratory Economics* that, if anything, pricing competition for physician offices has become more cutthroat over the past year.

Continued on page 4.

UPMC PATHOLOGISTS TO PROVIDE REMOTE CONSULTS FOR CHINESE LAB

The University of Pittsburgh Medical Center has signed a three-year agreement to provide second-opinion pathology consultations to King-Med Diagnostics, which is China's largest independent lab company. King-Med will digitize slides and store the images in a Web-based portal. UPMC pathologists will be able to access this portal without having to transmit the big files, which swallow up huge bandwidth, according to George Michalopoulos, MD, PhD, chairman of the pathology department at UPMC. Michalopoulos anticipates that UPMC pathologists will help interpret 1,000 digitized slides from KingMed in the first year with the volume increasing over time. The service is expected to start in late summer.

Full details on page 6.

MOHAPATRA'S DAYS AT QUEST COULD BE NUMBERED

Surya Mohapatra's tenure as chief executive at Quest Diagnostics could be coming to an end. His employment contract runs through December 31, 2011, and includes a six-month written notice of non-renewal. This means Quest's board of directors could reveal a change as early as July 1. "This contract renewal process could be a real catalyst for Quest since there is a growing consensus among investors that operating performance could be enhanced with new leadership," according to a recent report written by Darren Lehrich, analyst at Deutsche Bank Securities. "Given the CEO is near retirement age (61), it seems possible that a succession or change is being contemplated anyway," noted Lehrich. *Continued on pages 2-3.*

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WILL QUEST RENEW MOHAPATRA’S CONTRACT? (cont’d from page 1)

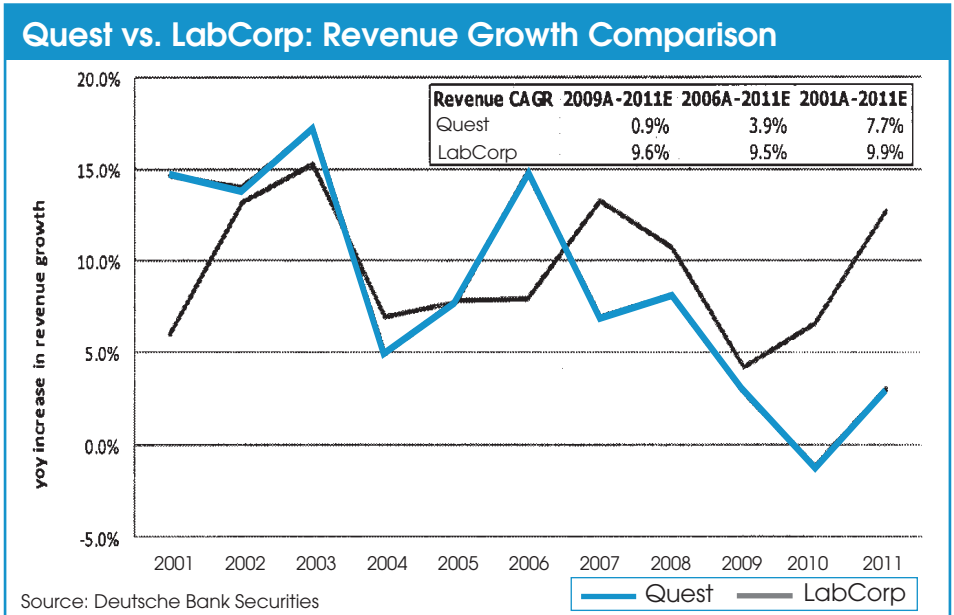
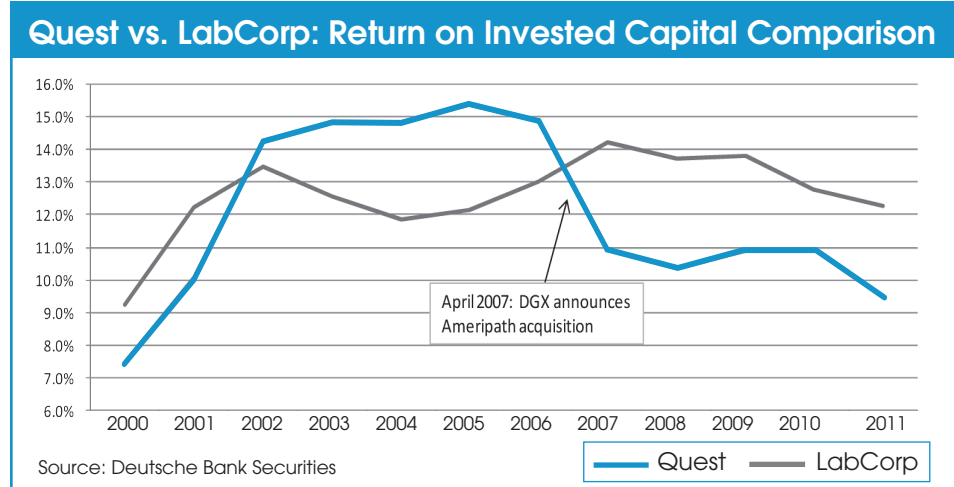
The stark reality is that since Mohapatra took the helm in 2004, Quest shares are up 36% versus 152% for LabCorp during the same time period, according to Lehigh’s report (*Quest for Change*; June 1, 2011). More recently, the performance gap has widened. Over the past 24 months (through May 31, 2011), Quest shares have returned 11% versus 63% for LabCorp.

The analyst’s report noted that Quest’s return on invested capital (ROIC) has steadily declined since the AmeriPath acquisition. ROIC is a calculation used to assess a company’s efficiency at allocating the money under its control

to profitable investments. “We believe AmeriPath ended up being a value-destroying transaction for Quest, and the amount of capital it has deployed for Athena Diagnostics and Celera Corporation could result in lower returns, as well,” according to Lehigh.

Laboratory Economics observes that the primary job of a CEO is to intelligently and responsibly allocate capital. Capital allocation decisions affect a company’s top and bottom line performance. And selecting the right acquisitions at the right price are the key allocation decisions made by the CEOs at Quest and LabCorp.

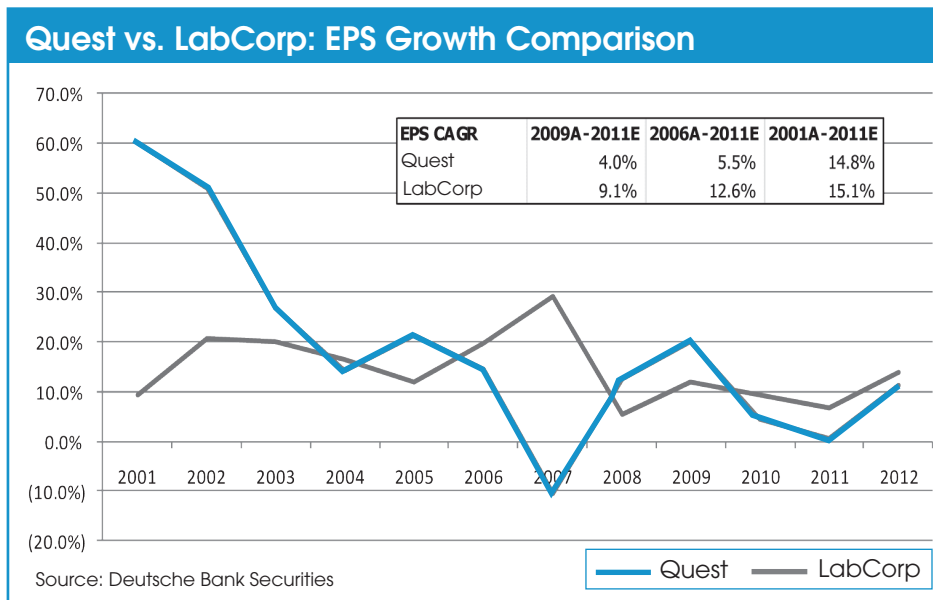
Poor capital allocation decisions, particularly the \$2 billion purchase of AmeriPath, have hurt Quest’s revenue and earnings growth. Quest and LabCorp each experienced a slowdown during the economic downturn; however, LabCorp’s revenue growth never turned negative like Quest’s did. The Lehigh report noted that even after stripping out acquisitions from LabCorp’s revenue growth in 2009-2010 (when it made more acquisitions than Quest), LabCorp



grew 3% to 5% per year, whereas Quest lost market share.

In addition, LabCorp's earnings per share (EPS) growth has been more consistent in recent years, and Lehigh estimates that it will accelerate to the mid-teens in 2012 due to accretion from recent acquisitions. Quest's EPS growth has been more heavily dependent on share buybacks, with buybacks shrinking share-count by 8% in 2010 and 10% in 2011.

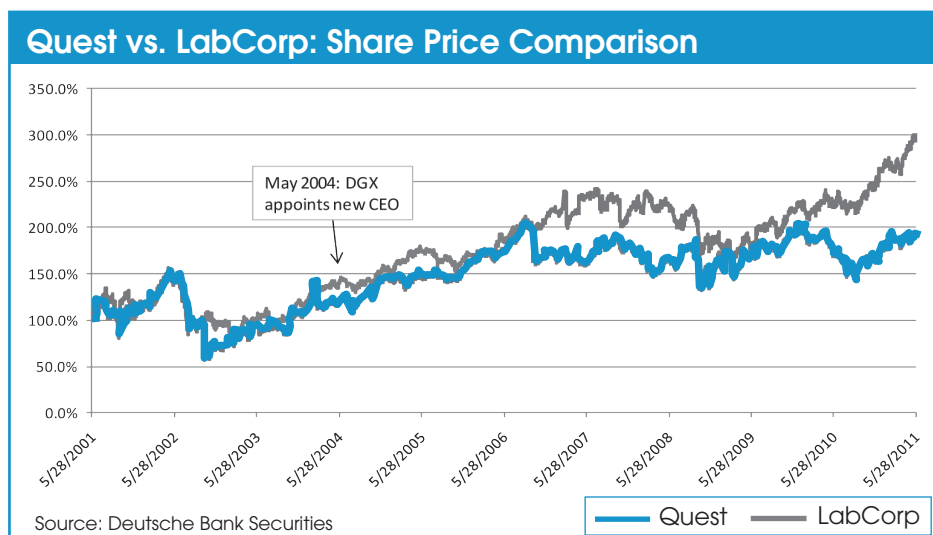
Finally, the Lehigh report noted the dramatic share price performance gap between the two companies. LabCorp's share price has outperformed due to its ability to compound gains with better revenue and earnings growth. As mentioned earlier, Quest shares are up 36% since



Mohapatra took the helm in 2004 versus 152% for LabCorp during the same time period. Note: These figures exclude dividends which would add roughly 1% per year to Quest's total return on a compound basis since initiating a dividend in 2004; Quest's current dividend yield is 0.7%.

LabCorp's rising stock price has lifted the company's overall stock market value from \$5.5 billion at the start of 2004 to its current \$9.65 billion. Over the same period, Quest's market value has gone from \$6.6 billion to \$9.22 billion.

The decision on whether or not to renew Mohapatra's employment contract will be made by the company's board of directors and will require a majority vote. Quest's board has eight members, including Mohapatra, who is chairman. "We would assume Quest's board of directors would take the company's absolute and relative performance into close consideration in the context of the CEO's impending employment contract renewal," says Lehigh.



WILL LAB TEST PRICING CHANGE IN CALIFORNIA? (*cont'd from page 1*)

Lale White, chief executive at the billing management firm Xifin Inc. (San Diego), says that most labs were already defaulting to Medi-Cal rates as their lowest rate even for direct physician billing. “We have always given Medi-Cal the lowest price as any client pricing we give,” says a hospital lab director from northern California.

The primary exception to the rule was Federally Qualified Health Centers (FQHC), which serve indigent patients. Quest has the state contract for these clinics as a result of its acquisition of Unilab. These contracts are priced below Medi-Cal and the state has benefited, according to White. The FQHCs are lobbying for new legislation (AB 969) to exempt them from the lowest comparable charge rule. And White says this is likely to be passed.

Who Gets the \$241 Million from the Quest Settlement?

- The State of California is getting \$171.1 million.
- The *Qui Tam* plaintiffs, Hunter Labs and its owner Chris Riedel, are getting \$69.9 million. (Note: *Qui Tam* settlements are counted as taxable income.)
- In addition to paying the settlement amount of \$241 million, Quest will pay the *Qui Tam* plaintiffs’ law firm, Cotchett, Pitre and McCarthy, reasonable attorneys’ fees and costs in connection with the five-year lawsuit. This amount—probably in the millions—is in dispute and will be resolved separately either by agreement, litigation or arbitration.

Overall, White believes there will be very little change in California from a pricing perspective. She says the only potential problem will be if other payer reimbursement contracts (e.g., fee-for-service managed care contracts) are included in the lowest comparable charge definition, in which case there will be a scramble to try to renegotiate contracts at higher prices. White says Medi-Cal is likely to provide more guidance on the lowest comparable charge rule after all *Qui Tam* lawsuits have been settled.

Meanwhile, *LE* notes that Quest’s \$241 million settlement with California requires the company to provide quarterly pricing reports to the Department of Health Care Services through December 2013. In lieu of submitting these reports for the first five quarters, Quest has the option of submitting its Medi-Cal claims at no more than 85% of the Medi-Cal clinical lab fee schedule from May 1, 2011 through July 31, 2012.

Medi-Cal rates are currently set at approximately 75% of the national Medicare Part B clinical lab fee schedule. So this means that Medi-Cal will now begin reimbursing Quest at approximately 64% of Medicare rates (75% x 85%=64%).

In addition, Quest’s settlement with California does not preclude other states from pursuing similar settlements. And the list of states investigating lab billing practices is growing. States with investigations underway include Florida, Georgia, Massachusetts, Michigan, Nevada, New York and Virginia.

The Medi-Cal program covers 7.7 million Medicaid recipients and spends roughly \$200 million per year on independent clinical lab services. Quest derives more than \$60 million of revenue per year from Medi-Cal. LabCorp derives more than \$25 million per year from Medi-Cal.

QUEST ANSWERS BACK

In our May 2011 issue, *Laboratory Economics* accurately quoted attorney Niall McCarthy as saying: “This lawsuit will fundamentally change the way laboratories do business. Now that ‘pull-through’ has been exposed as a violation of law, the old way of doing business will cease to exist. Moreover, independent labs will have a fair chance to compete for business based on servicing ability rather than deeply discounted pricing.”

Here’s the response from Gary Samuels, vice president, corporate communications, at Quest:

I am writing to correct false and inappropriate statements included in an article on our settlement of a Medi-Cal lawsuit published in your May 2011 edition. In a direct quotation, the plaintiff’s attorney Niall McCarthy of Cotchett, Pitre & McCarthy said that “pull-through” has “been exposed as a violation of the law,” which is false and misleading in a number of respects. As Mr. McCarthy well knows, there was never any legal or factual finding regarding the purported “illegality” of “pull-through” and there was certainly no finding or judicial determination of any kind that Quest Diagnostics committed any wrongful acts. In fact, the allegations made in the litigation were denied and fiercely disputed by Quest Diagnostics and the litigation was settled without any admission of liability.

The settlement provides a process for billing for Medi-Cal services, at least until November 2013. In the meantime, we are exploring legislative action with our government representatives in California to ensure clarity is provided for the entire CA lab industry in interpreting the regulations. In the event that the legislative efforts are unsuccessful and should Medi-Cal continue to insist on its current interpretation of the comparable charge billing regulations, the price for lab services to all Californians will likely increase, which would obviously be contrary to national efforts to reduce escalating healthcare costs.

NATIONWIDE MEDICAID BUDGET PRESSURE

Healthcare reform is projected to expand the number of Medicaid recipients from 55 million today to more than 70 million over the next 10 years. Although the federal government will initially pay most of the costs, many states are concerned about paying for the new beneficiaries once government subsidies decline. Some states, including Texas and Florida, are considering moving Medicaid beneficiaries into managed care plans as means of containing costs, while others are simply cutting their fee-for-service payments. State Medicaid programs generally pay less than Medicare for lab tests. And further reductions—either through capitated contracts or fee schedule cuts—are on the way.

Indiana Medicaid Cuts Lab Reimbursement by 5%

The Indiana Health Coverage Programs for Medicaid members will reduce its reimbursement to independent labs by 5% effective July 1, 2011 through June 30, 2013. This change will be applied to all clinical lab services provided to Traditional Medicaid, Hoosier Healthwise, and Care Select claims. These programs cover approximately one million Medicaid members. Indiana Medicaid reimbursement for clinical lab tests is currently set slightly below the national Medicare Part B clinical lab fee schedule.

SC Medicaid To Cut Lab Reimbursement by 7%

The South Carolina Department of Health and Human Services (SCDHHS) has proposed a 7% cut to Medicaid reimbursement to independent labs effective July 8, 2011. The cut comes in addition to an across-the-board 3% reduction to all Medicaid providers announced by SCDHHS in April. South Carolina Medicaid reimbursement for most clinical lab tests is currently set at 87% of the national Medicare Part B clinical lab fee schedule. The proposed cut would drop lab fees to approximately 80% of Medicare. There are approximately one million Medicaid recipients in South Carolina representing 20% of the state’s total population.

UPMC SIGNS DEAL TO CONSULT IN CHINA (*cont'd from page 1*)

Michalopoulos notes that there is a shortage of pathologists in China, which has no structured education system for training pathologists. As part of the agreement, UPMC will also provide training to KingMed pathologists and information technology specialists in Pittsburgh and will hold joint academic meetings as part of ongoing medical education in China.

Michael Farmer, consultant at McEvoy & Farmer (Seattle), which specializes in the Asian lab markets, says lab testing in China has always been focused at hospitals. Private labs, such as KingMed, currently represent less than 5% of the market in China, but their significance is growing. "It has been difficult to get hospital labs to send tests out, but we understand this is now happening," notes Farmer. "In the past, if a hospital lacked the ability to do the needed test, the patient was often referred to a hospital that could, or the test was simply not done."

In a press release, Yaoming Liang, founder and CEO of KingMed, said the agreement "provides our patients with access to another source of pathology expertise that is not widely available in China."

The Mechanics of the UPMC/KingMed Deal:

- KingMed will determine if a complex cancer case will benefit from a second opinion.
- KingMed will inform the patient and get their authorization for the consult with UPMC.
- KingMed will scan the glass slide using Hamamatsu's NanoZoomer Digital Imaging System.
- The digitized slide image will be stored in a secure Web portal.
- UPMC will be alerted and an appropriate sub-specialist pathologist will be assigned to the case.
- The pathologist will report his interpretation back to KingMed via the Web portal.
- Patients will pay KingMed directly for second opinions.
- KingMed will then pay UPMC a flat fee for each case.

KingMed, which was founded in 1994, was one of the first commercial lab companies formed in China. The company processes approximately 500,000 samples annually at 17 central labs that provide testing services to 6,000 hospitals and clinics in 26 of China's 33 provincial regions. KingMed is headquartered in Guangzhou (southern China) and is CAP-accredited.

UPMC's Department of Pathology has 130 diagnostic pathologists, of which about 30 to 40 sub-specialists will provide service to KingMed, according to Michalopoulos. He expects turnaround time to be three days or less.

In the future, Michalopoulos says that KingMed will transition from Hamamatsu to the digital pathology system being created by Omnyx (Pittsburgh, PA). Omnyx is a joint venture between UPMC and GE Healthcare (see LE, July 2008). A comprehensive clinical trial of the Omnyx system is currently underway at UPMC, Stanford University Medical Center, Montefiore Medical Center in New York City, and University Health Network in Toronto.

UCLA Providing Consults in China

The UPMC-KingMed deal comes on the heels of a similar arrangement that Ronald Reagan UCLA Medical Center (Los Angeles) announced earlier this year. More than 30 sub-specialty pathologists from UCLA are providing remote consultations to Second Affiliated Hospital Zhejiang University, a 2,000-bed hospital located in southeast China. The partnership is using the Aperio digital pathology system. UCLA pathologists have provided consults on more than 100 cases to date.

LABCORP TO BUY CLEARSTONE CENTRAL LABS

LabCorp has agreed to buy Clearstone Central Laboratories (Toronto, Canada) for an undisclosed price. The deal is expected to close by the end of the month.

Clearstone, which was formerly named MDS Pharma Services' Central Labs, provides lab testing services to late-stage clinical drug trials. The company employs 500 people worldwide at its labs and kit production facilities in Beijing, Hamburg, Paris, Singapore and Toronto.

Clearstone is owned by the private investment group Czura Thornton, which bought the company from MDS Pharma Services in late 2009 for about \$8 million. Over the past two years, Czura Thornton has consolidated sites and cut about 100 employees to improve profitability at Clearstone.

The deal follows a strategic alliance between LabCorp's Esoterix division and Clearstone that was announced in August 2010.

LabCorp's existing clinical trials testing business is relatively small at approximately \$120 million per year, representing about 2% of companywide revenue.

Separately, LabCorp's planned acquisition of Orchid Cellmark (Princeton, NJ) continues to be delayed by the FTC, which is investigating possible antitrust issues. LabCorp announced an agreement to buy Orchid for 85.4 million in April.

ASCENSION HEALTH INVESTS IN SOLSTAS LAB PARTNERS

Ascension Health Ventures (AHV) has invested an undisclosed amount into Solstas Lab Partners (Greensboro, NC). AHV joins Carilion Clinic, Novant Health System and Wellmont Health Systems as minority investors. The private investment firm Welsh Carson (New York City) retains majority ownership.

The deal gives Solstas capital for growth and could also open doors for new business with hospitals connected with AHV.

Solstas Lab Partners was formed in March 2010 when Spectrum Labs merged with Carilion Labs in conjunction with an investment by Welsh Carson. Solstas then acquired Doctors Laboratory (Valdosta, GA) in October 2010. Solstas has annual revenue of more than \$350 million and 3,500 employees.

AHV is a venture capital firm launched in 2001 by Ascension Health (St. Louis, MO) with a commitment of \$125 million to invest in healthcare companies. AHV raised another \$200 million from Ascension Health, Catholic Health East, Catholic Health Initiatives and Catholic Healthcare West. In total, AHV's four limited partners operate more than 200 hospitals in 38 states.

"In addition to financial return, AHV opportunities are evaluated for potential clinical, operational and financial benefits to its limited partner health systems. AHV adds value to its portfolio companies by sharing solutions across a network of more than 200 acute care hospitals," according to a press release issued by Solstas.

AHV has invested in more than 30 healthcare companies. For example, AHV was an early investor in the medical image management vendor Emageon Inc. (now owned by Amicus). Ascension Health is Emageon's largest customer.

EMBLEMHEALTH CANCELS LABCORP CONTRACTS

EmblemHealth (New York City) has ended its contract with Genzyme Genetics (acquired by LabCorp in December 2010) effective March 31, 2011. Genzyme had been a contracted provider of genetic testing and counseling services.

In addition, EmblemHealth has announced that it is terminating its contract with Monogram Biosciences (acquired by LabCorp in July 2009) effective July 1, 2011. Monogram provides HIV drug-resistance testing and HIV-1 co-receptor tropism testing services.

Emblem has directed its providers to refer these tests to Quest Diagnostics.

Quest is the preferred clinical and pathology lab provider for all EmblemHealth plans. The switch to Quest from Genzyme and Monogram will undoubtedly come at lower pricing and a cost savings to EmblemHealth.

EmblemHealth was formed by the merger of HIP Health Plan of New York and GHI (Group Health Incorporated) in 2006. EmblemHealth covers 2.9 million health plan members in New York, New Jersey and Connecticut.

MEDICARE TO COVER PATHWORK TISSUE OF ORIGIN TEST

Palmetto GBA, the contractor that administers Medicare in California, has issued a positive coverage policy for the Pathwork Tissue of Origin Test. Because all Tissue of Origin test specimens are processed in the Pathwork Diagnostics' CLIA-certified lab in Redwood City, California, the Palmetto decision means that the test will be covered for all Medicare patients across the nation.

Pathwork received FDA clearance to market its Tissue of Origin Test for formalin-fixed, paraffin-embedded (FFPE) tissues in June (see *LE*, June 2010, page 11). The test is used to help diagnosis of tumors of uncertain origin, including poorly differentiated, undifferentiated and metastatic tumors. The test uses a microarray (PathChip, manufactured by Affymetrix) and prediction algorithms to determine the most likely source of the cancer.

Pathwork has been marketing the test directly to oncologists and performing the test at its lab for a list price of \$4,500. Pathwork plans to begin marketing the test in kit form to other labs within the next 12 months.

STUDY: THREE-YEAR CERVICAL SCREENING IS EFFECTIVE

Women who receive normal cervical screening results can safely receive screening just once every three years if both the HPV test and conventional Pap test are used, according to a study by the National Cancer Institute.

The study followed 331,818 women age 30 and older, who enrolled in a cervical cancer testing program at Kaiser Permanente in northern California between 2003 and 2005. Participants were followed for five years to see whether they developed cervical cancer.

The researchers found that just 3.2 per 100,000 women per year developed cancer after receiving both a normal Pap test and a negative HPV result. Of the women who had only a Pap test, 7.5 per 100,000 developed cancer.

Lead author Hormuzd Katki, PhD, principal investigator at NCI's Division of Cancer Epidemiology and genetics, said: "Our results are a formal confirmation that the three-year follow-up is appropriate and safe for women who have a negative HPV test and normal pap result."

The study validates current recommendations from the American Congress of Obstetricians and Gynecologists, American Cancer Society and American Society for Colposcopy and Cervical Pathology endorsing a three-year screening interval for women over age 30 with a negative HPV test and normal Pap test.

As well as confirming the safety of the three-year screening intervals for most women, the study also showed that HPV testing alone may be more accurate than the Pap test alone. Women who tested negative for HPV were about half as likely to subsequently develop cervical cancer as those who had a conventional Pap test. Furthermore, the risk of developing cervical cancer following HPV testing alone was similar to that following co-testing.

BIOLOGICAL AGE TEST CAUSES CONTROVERSY

Life Length (Madrid, Spain) has developed a blood test to determine a person's biological age. The test measures the percentage of short telomeres in individual cells to assess cellular aging. Telomeres are structures on the tip of chromosomes that scientists believe can accurately indicate the speed at which a person is aging. Shortened telomeres correspond to a shorter lifespan.

Life Length's Telomere Analysis Technology (TAT) test will hit counters later this year in Britain at a cost of €500 (about USD \$712), then the blood samples will be sent to Life Length in Spain for analysis. Life Length anticipates business will grow from hundreds of tests to thousands as demand increases and drives down the price.

The concern is that the results of the test could be used by companies to deny medical or life insurance coverage, or that third-party vendors will use the information to sell useless anti-aging remedies claiming to lengthen telomeres.

Maria Blasco, PhD, developed the TAT test at the Spanish National Cancer Research Centre and then went on to found Life Length in September 2010, together with Matlin Associates and the Botin Foundation, planning to mass market the product.

Life Length is not the first company to perform telomere analysis. Other labs offering telomere analysis include Repeat Diagnostics (Vancouver, Canada), SpectraCell Laboratories (Houston, TX) and the cytogenetics lab at the University of Chicago. A new company, Telomere Health (Menlo Park, CA), co-founded by Elizabeth H. Blackburn who won a Nobel Peace prize for her 2009 discoveries in this field, plans to make their test available to individuals in the fall 2011 for about \$200.

The difference is that the other labs test for average telomere length, whereas Life Length finds the shortest telomere lengths, which is more useful in determining biological age because when telomeres are dangerously short, the cells cease replicating, and this is what leads to aging. In a May 16, 2011 article in *The Independent* ("The £400 Test That Tells You How Long You'll Live"), Blasco says if people knew their biological age they could change their lifestyle habits. But the solutions are: eat right, exercise, maintain a healthy weight, don't smoke and lower stress—the same medical advice doctors have given patients for years without a \$700 test.

TOP 30 HISTOLOGY LABS IN UNITED STATES

Quest Diagnostics and LabCorp dominate the list of top 30 independent histology labs, according to data from the CLIA Provider Survey Files. Other histology labs breaking into the top 30 include: Caris Life Sciences (Irving, TX), ProPath Services (Dallas, TX), Sonic Healthcare/Sunrise Medical Labs (Hicksville, NY), Sonic Healthcare/Clinical Pathology Labs (Austin, TX), Shiel Medical Labs (Brooklyn, NY) and Bio-Reference Labs/GenPath (Elmwood Park, NJ).

Top 30 Independent Histology Labs by Annual Histopathology Test Volume

Laboratory Name	City	State	Annual Histopathology Test Volume*
LabCorp/Dianon	Tampa	FL	1,560,090
LabCorp	Birmingham	AL	1,334,774
Quest Diagnostics	Teterboro	NJ	1,099,322
Quest Diagnostics	Tampa	FL	980,000
Quest/AmeriPath	Dallas	TX	865,000
LabCorp/Dianon	Shelton	CT	761,015
Quest/AmeriPath	Port Chester	NY	688,307
LabCorp/Dianon	Uniondale	NY	686,048
Quest Diagnostics	Schaumburg	IL	670,161
Caris Life Sciences	Irving	TX	658,669
ProPath Services	Dallas	TX	614,495
Sonic/Sunrise Medical Labs	Hicksville	NY	604,114
Sonic/Clinical Pathology Labs	Austin	TX	557,727
Sonora Quest Laboratories	Tempe	AZ	552,453
Quest Diagnostics	Las Vegas	NV	490,000
LabCorp/Dianon	Oklahoma City	OK	430,602
Shiel Medical Lab	Brooklyn	NY	424,233
Quest Diagnostics	Wood Dale	IL	421,705
Bio-Reference/GenPath	Elmwood Park	NJ	400,000
Quest Diagnostics	Syosset	NY	396,796
Quest Diagnostics	Saint Louis	MO	382,780
LabCorp	Houston	TX	368,383
Quest Diagnostics	Auburn Hills	MI	354,642
Quest/AmeriPath	Cincinnati	OH	348,880
LabCorp	Dallas	TX	342,608
LabCorp	Phoenix	AZ	342,384
Quest Diagnostics	Baltimore	MD	328,410
Quest Diagnostics	Horsham	PA	325,700
LabCorp/LabWest	Monrovia	CA	316,738
LabCorp	Louisville	KY	299,000
Total, 30 histology labs			17,605,036

*Definition of test volume for histopathology: Each block (not slide) is counted as one test. For those labs that perform special stains on histology slides, the test volume is determined by adding the number of special stains performed on slides to the total number of specimen blocks prepared by the laboratory.

Source: *Laboratory Economics* from the CLIA Provider Survey Files/February 2011

Special Offer: To purchase the complete database of 1,300+ independent histology labs go to:
www.laboratoryeconomics.com.

COMMERCIAL LABS AVERAGE \$237K REVENUE PER EMPLOYEE

Commercial lab companies averaged \$237,468 in revenue per employee in 2010, according to an *LE* analysis of financial data from 20 commercial lab companies.

Average annual revenue per employee at five commercial clinical labs was \$154,183. Bio-Reference was highest at \$217,485 per employee.

Revenue per employee at 13 esoteric/pathology lab companies averaged \$283,642. Prometheus Labs was highest at \$508,069 per employee.

At two drugs-of-abuse testing companies, revenue per employee averaged \$187,536. Psychemedics averaged \$220,978 and Medtox was \$154,094.

Revenue per Employee at 20 Commercial Labs

Lab Companies	Full-Year 2010 Revenue (\$000)	Number of Employees	Revenue per Employee
Bio-Reference	\$458,024	2,106	\$217,485
Enzo Clinical Labs (lab services)	\$44,178	379	\$116,565
LabCorp	\$5,003,900	31,000	\$161,416
Quest Diagnostics	\$7,368,925	42,000	\$175,451
Solstas Lab Partners	\$350,000	3,500	\$100,000
<i>Average</i>			\$154,183
Esoteric/Pathology Labs			
Athena Diagnostics	\$110,000	300	\$366,667
Aurora Diagnostics	\$212,837	1,052	\$202,317
CBLPath	\$85,000	400	\$212,500
Celera/Berkeley HeartLab	\$77,500	288	\$269,097
Clariant Inc.	\$119,600	450	\$265,778
CombiMatrix	\$3,554	40	\$88,850
Genomic Health	\$178,101	472	\$377,333
Genoptix	\$195,000	500	\$390,000
Genzyme Genetics	\$370,000	1,900	\$194,737
Myriad Genetics	\$362,648	870	\$416,837
NeoGenomics	\$34,371	180	\$190,950
Orchid Cellmark	\$63,721	530	\$120,228
Prometheus RxDx (lab services)	\$81,291	160	\$508,069
<i>Average</i>			\$283,642
Drugs-of-Abuse Labs			
Medtox Scientific (lab services)	\$77,047	500	\$154,094
Psychemedics	\$20,109	91	\$220,978
<i>Average</i>			\$187,536
Overall Average			\$237,468

Note: Calculations were based on total number of employees at each company, including all technical, administrative and sales and marketing staff.

Source: *Laboratory Economics* from company reports

LAB STOCKS UP 14% YEAR TO DATE

Eleven lab stocks have risen by an unweighted average of 14% so far this year through June 10. The combined market capitalization for the group is currently \$23.3 billion. In comparison, the S&P 500 Index is up 1% and the Nasdaq is unchanged. The top-performing lab stock so far this year is CombiMatrix, up 55%, followed by Medtox, up 38%. Meanwhile, the stock price of LabCorp is up 9% and Quest is up 8%.

Company (ticker)	Stock Price 12/31/10	Stock Price 6/10/11	2011 Price Gain	Market Capitalization (\$ millions)	Earnings Past 12 Months	Price-to-Earnings Ratio
Bio-Reference (BRLI)	\$22.18	\$21.86	-1%	\$611	\$1.16	18.8
CombiMatrix (CBMX)	2.15	3.33	55%	36	-1.02	NA
Celera (CRA)*	6.30	8.00	27%	662	-0.23	NA
Enzo Biochem (ENZ)	5.28	3.74	-29%	144	-0.35	NA
Genomic Health (GHDX)	21.39	25.79	21%	755	0.20	129.0
LabCorp (LH)	87.92	95.54	9%	9,573	5.66	16.9
Medtox Scientific (MTOX)	13.10	18.05	38%	161	0.42	43.0
Myriad Genetics (MYGN)	22.84	24.19	6%	2,074	1.20	20.2
Neogenomics (NGNM)	1.30	1.35	4%	58	-0.10	NA
Psychemedics (PMD)	8.20	9.50	16%	50	0.57	16.7
Quest Diagnostics (DGX)	53.97	58.51	8%	9,206	2.85	20.5
Averages			14%	23,330		37.9

*Celera was acquired by Quest Diagnostics on May 10, 2011 for \$8 per share.

Source: Bloomberg

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