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LABORATORY ECONOMICS

Competitive Market Analysis For Laboratory Management Decision Makers

PALMETTO SLASHES PROSTATE BIOPSY FEES

Medicare carrier Palmetto GBA has issued clarification on coding of prostate biopsies that effectively cuts pathology reimbursement by nearly 50%.

The policy update, issued on August 7, caps global pathology reimbursement for prostate biopsies at $671 anytime five or more separate specimens are billed. Previously, pathology groups and labs had billed up to $1,270 for a typical 12-core prostate biopsy (12 x CPT 88305). The policy update may have been prompted by the growth of in-office pathology labs at urology groups. However, in their zeal to curb utilization at in-office labs, Palmetto is hammering all pathologists and independent pathology labs.

So far, no other Medicare carriers have issued similar policy clarifications, although that might just be a matter of time.

Continued on pages 5-7.

CMS TURNS TO PART B CARRIERS TO GAP-FILL PAYMENT FOR NEW MOLECULAR TESTS

CMS has handed off the difficult task of pricing 100+ new molecular CPT codes to the eight Medicare carriers that process Part B claims in 15 regions across the United States. These carriers are owned by large commercial health insurance companies such as BCBS Florida, BCBS South Carolina, Cigna and Wellpoint. The clinical lab industry had hoped that CMS would use the "crosswalk" method and price the new tests at the median prices currently charged by labs using code stacks. But in a Sept. 1 bulletin, CMS said that it did not receive enough information from the lab industry to accurately crosswalk the new codes. So CMS has turned to the "gap-fill" method of pricing which relies on Medicare carriers. The carriers are expected to take a harder line toward pricing.

Continued on pages 3-4.

BIG TEXAS ONCOLOGY GROUP OPENS PATH LAB

South Texas Oncology & Hematology PA (STOH—San Antonio), which includes 26 medical, surgical and radiation oncologists, has opened its own pathology lab under the name Oncopath Laboratory LLC.

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BIG TEXAS ONCOLOGY GROUP OPENS PATHOLOGY LAB (*cont'd from p. 1*)

The new lab is located at the group's START Center for Cancer Care in San Antonio. The START Center is an outpatient facility that provides chemotherapy and radiation oncology services, as well as a Phase I clinical trials program.

Oncopath is performing molecular testing for all newly diagnosed solid tumors including lung, colon, brain, breast and melanoma on site, according to Shelly Gunn, MD, PhD, medical director for Oncopath. On-site testing includes FDA-approved BRAF V600E testing for Zelboraf therapy in metastatic melanoma, as well as KRAS, EGFR, PIK3CA, HRAS, NRAS, JAK2, KIT, MET, IDH1, IDH2 mutation analysis and MGMT methylation analysis.

The new lab also performs full histopathology services and all tumor-targeted DNA extractions. "This allows us to either store the patient's tumor DNA and/or send it to another lab if biomarker testing is needed that we don't perform in-house," says Gunn. She says that keeping the patient's tumor tissue close is more efficient. "Sending the patient's paraffin embedded tumor tissue to multiple labs around the country inevitably results in melting of the block, exhaustion of the tumor tissue, and fragmented test results that are never correlated into a coherent narrative report for the treating oncologist," notes Gunn.

Oncopath bills globally for all technical and professional fees. It has contracted with South Texas Pathology Associates (STPA—San Antonio) at a negotiated rate to provide professional services. STPA's Mike Lovell, MD, is director of anatomic pathology for Oncopath.

STOH invested approximately $750,000 to build and equip the new lab. The lab occupies about 2100 square feet on the first floor of the START Center building and employs one histotechnologist and two genomic technologists. Since the lab opened in March 2012, it has analyzed over 300 patient cases and Gunn is projecting 500 cases by the end of this year. The lab is CLIA-certified and currently seeking CAP accreditation with its first inspection scheduled for the end of this year or early 2013.

PathCentral (Irvine, CA) is serving as the reference lab and providing LIS support to Oncopath. DNA from patient cases that need extended biomarker analysis by array CGH are sent to PathCentral for tech-only services with professional interpretation performed at Oncopath by Dr. Gunn. Send-outs include all hematological malignancies, breast cancers for resolution of equivocal HER2 status, and brain tumors for diagnostic subtyping by CGH. Oncopath also sends newly-diagnosed NSC lung cancers to PathCentral for ALK testing.

Previously, multiple labs were providing molecular testing for the START Center, including Clarient, LabCorp/Genzyme Genetics, Quest Diagnostics, Response Genetics, Caris Diagnostics and NeoGenomics.

Gunn says Oncopath is marketing its services to other oncology groups and hospitals in south Texas and recently contracted to provide molecular testing for the Methodist Hospital system in San Antonio. She says this five-hospital system was previously sending tissue to many of the same reference labs listed above.

"Having testing on-site allows oncologists to quickly have the information they need to either choose FDA-approved targeted therapies such as Zelboraf, Tarceva, Cetuximab, Temodar and Herceptin, or refer the patient to a clinical trial," according to Gunn.

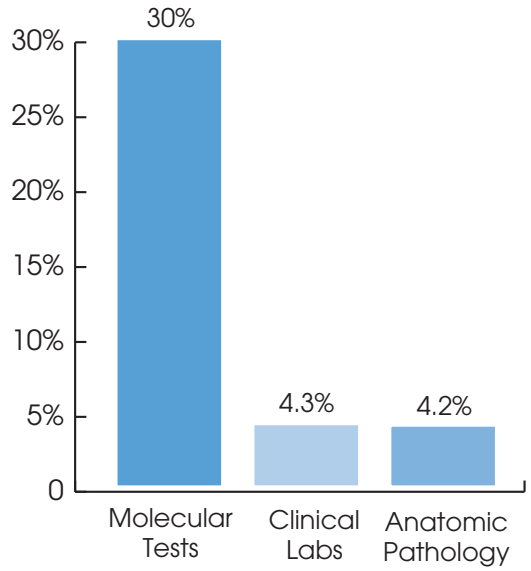
CMS TURNS TO PART B CARRIERS TO PRICE MDx TESTS (*cont'd from p. 1*)

Medicare carriers have every incentive to lowball prices for the new molecular test codes because Medicare reimbursement rates (both from the clinical lab fee schedule and physician fee schedule) are the base from which commercial insurance plan rates are discounted.

For example, if Palmetto slashes Part B molecular test fees, then Palmetto's parent company (BCBS of South Carolina) is likely to follow by cutting fees for its commercial PPO, POS and HMO plans.

Where the 100+ new molecular CPT codes are placed (CLFS or MPFS) and how reimbursement rates are determined is crucial for the future of both clinical labs and pathologists. As measured by Medicare Part B expenditures, the molecular test market is growing by 30% per year versus 4.3% for clinical labs and 4.2% for anatomic pathology.

Medicare Part B Carrier Expenditure Growth (Annualized for 2005-2010)



Source: *Laboratory Economics* from CMS

Now that CMS has recommended the gap-fill method for pricing, the next step is determining which fee schedule to place the new molecular test codes. Charles Root, president of the lab reimbursement consulting firm CodeMap (Schaumburg, IL), thinks nearly all the codes will be placed on the CLFS and only few, if any, on the MPFS. CMS will announce its final decision in early November.

Who Will Determine MDx Reimbursement Rates?

State	*Beneficiaries*	*Part B Carrier*	*Parent Company*
Arizona	933,435	Noridian Admin. Services	Noridian Mutual Insurance Co.
California	4,806,469	Palmetto GBA	BCBS South Carolina
Florida	3,390,801	First Coast Service Options	BCBS Florida
Georgia	1,256,047	Cahaba Government Benefit	BCBS Alabama
Illinois	1,854,402	Wisconsin Physician Service	WPS Health Insurance
Massachusetts	1,067,929	NHIC Corp.	Hewlett-Packard
Michigan	1,669,386	Wisconsin Physician Service	WPS Health Insurance
New Jersey	1,336,988	Novitas Solutions Inc.	BCBS Florida
New York	3,009,756	National Government Services	Wellpoint
North Carolina	1,505,942	Palmetto GBA	BCBS South Carolina
Ohio	1,909,462	Cigna Government Services	Cigna Corp.
Pennsylvania	2,290,509	Novitas Solutions Inc.	BCBS Florida
Texas	3,044,936	Novitas Solutions Inc.	BCBS Florida
Virginia	1,155,428	Palmetto GBA	BCBS South Carolina
Washington	983,107	Noridian Admin. Services	Noridian Mutual Insurance Co.

Source: *Laboratory Economics* from CMS

Medicare carriers will then scramble to calculate their gap-fill reimbursement rates by Jan. 1, 2013. Under gap-filling, the first-year payment for each new code is set by each carrier for their jurisdiction. Carriers are supposed to examine several sources of information to set rates, such as lab test charges, costs to perform the test, and payment amounts determined by other payers. In addition, if a carrier determines that a less costly alternative test exists, the carrier may adopt this payment rate as the gap-fill amount for a new test code.

Preliminary carrier gap-fill rates will be made public in April 2013. Following a comment period, carriers will finalize their gap-fill rates in September 2013. CMS will use these rates to determine the median prices for each code to establish the national limitation amount (NLA) for the clinical lab fee schedule for 2014.

CodeMap's Root believes most carriers are ill prepared to calculate molecular test reimbursement in such a short time frame. He says that many carriers don't have payment data for many of the new codes. "They might wind up picking prices out of thin air or copying what Palmetto does. I expect a lot of protests and redetermination requests from labs. It could take years to sort out," according to Root.

Bruce Quinn, MD, PhD, senior health policy specialist at Foley Hoag LLP, thinks that carriers could wind up setting prices at the medians now charged by labs using code stacks after all. "I'm surprised CMS didn't choose the crosswalk method in the first place. Most of the new molecular codes have pretty obvious crosswalks to existing code stacks," says Quinn.

Counting On Technology To Save The Day

Medicare reimbursement for molecular tests is likely to drop. However, Root is optimistic that automation and improving technology will lower the costs for performing these tests. He notes that once CMS sets national reimbursement rates for new tests, these rates tend to change very little from year to year. As a result, Root expects lab profit margins on molecular tests to improve over time as reimbursement remains fairly steady and costs are significantly lowered from improving technology.

CMS Will Not Pay For Algorithmic Analyses

The lab industry had been pressing CMS to establish payment for multi-analyte assays with algorithmic analyses (MAAAs). However, in its Sept. 1 bulletin, CMS said Medicare uses other codes to pay for the underlying lab tests on which the MAAA is done and recommended not separately pricing MAAA codes.

MAAAs are combinations of assays whose test results are put into proprietary mathematical formulas to derive a single numeric score or index that can predict a patient's risk of cancer or other disease. For example, Vermillion's OVA1 test uses five markers to help identify women who are at high risk of having a malignant ovarian tumor and should have surgery.

The lab industry was hoping to get additional reimbursement to compensate for the time and money spent clinically validating these algorithms.

CMS To Gap-Fill Circulating Tumor Cell Test

Finally, CMS has recommended that the new code for the circulating tumor cell enumeration blood test (CPT 861XX) be gap-filled by carriers. The lab industry had pushed to crosswalk the test to either CPT 88239/$209 or 88283/$97 or 88249/$245.

PALMETTO SLASHES PROSTATE BIOPSY FEES (*cont'd from page 1*)

Palmetto GBA, a subsidiary of Blue Cross and Blue Shield of South Carolina (Columbia, SC), is the nation's largest Medicare carrier. Palmetto processes claims and payment for approximately 13.6 million Medicare beneficiaries in seven states: California, Nevada, Hawaii, North Carolina, South Carolina, Virginia and West Virginia.

Specifically, Palmetto's August 7 policy update says Medicare has limited the number of prostate biopsies that may be reported for CPT 88305 to four units of service (UOS). To report five or more prostate biopsies, providers must use G0416 with one unit of service. CPT 88305 and G0416 cannot be billed in combination for the same patient case.

The policy update means that technical component reimbursement for a 12-core prostate biopsy is now capped with G0416 at $488.75, down 42% from $837.36 (12 x 88305-TC). The news is even worse for pathologists who perform PC-only services. Professional component reimbursement for G0416 is $182.10, down 58% from $432.96 (12 x 88305-PC). The reimbursement details are provided in the table below.

MEDICARE REIMBURSEMENT CHANGES FOR 12-CORE PROSTATE BIOPSY

New Reimbursement under HCPCS Code G0416*

Code	*Rate*	*UOS*	*Total Reimbursement*
G0416-TC:	488.78	1	488.75
G0416-PC:	182.10	1	182.10
Global G0416:	$670.88	1	$670.88

Former Reimbursement under CPT 88305*

Code	*Rate*	*UOS*	*Total Reimbursement*
88305-TC:	69.78	12	837.36
88305-PC:	36.08	12	432.96
Global 88305:	$105.86	12	$1,270.32

*Medicare rates are unadjusted for geographic practice cost differences

Source: *Laboratory Economics*

Prior to Palmetto's policy update many pathology labs had thought the G0416 code was to be used only when specimens were obtained from the infrequently used saturation biopsy technique (CPT 55706). However, Palmetto has made it clear that G0416 should be used for all prostate biopsy techniques including conventional procedures (CPT 55700).

Furthermore, Palmetto says that providers who have submitted more than four CPT 88305s for prostate biopsies on and after January 1, 2012 may be at risk for overpayment collection.

Did the Mitchell Study Motivate CMS and Palmetto?

The utilization study (*Self-Referral for Pathology of Biopsy Specimens Linked to Increased Use and Lower Prostate Cancer Detection*) authored by Jean Mitchell, PhD, may have influenced Palmetto's

decision to cap pathology reimbursement for prostate biopsies. The Mitchell study was published in the April 2012 issue of Health Affairs and showed that self-referring urologists bill for nearly twice as many tissue samples as those that use an outside pathology lab (see *LE*, April 2012, page 1). CMS has posted a copy of the Mitchell study on its website at *www.cms.gov/Research-Statistics.../MMRR2012_002_03_A02.pdf*.

The College of American Pathologists (CAP) and American Clinical Laboratory Assn. (ACLA) helped fund the study with the hope it would lead to new legislation banning in-office pathology labs. But instead of using a scalpel, Palmetto has taken a meat cleaver approach by indiscriminately slashing prostate biopsy fees for all pathologists and labs.

ACLA and AUA Urging Palmetto To Reconsider

Palmetto has taken a policy from the National Correct Coding Initiative (NCCI) intended for post-diagnosis saturation biopsies and improperly applied it to pre-diagnosis biopsies, according to Alan Mertz, president of ACLA. "It's like taking rules for apples and applying them to oranges," says Mertz.

The National Correct Coding Initiative Policy Manual released in January 2012 stated:

> *"HCPCS Codes G0416-G0419 describe surgical pathology, including gross and microscopic examination, or prostate needle biopsies from a saturation biopsy sampling procedure. CMS requires that these codes rather than CPT Code 88305 be utilized only if the number of separately identified needle biopsy specimens is five or more. Surgical pathology on four or fewer prostate needle biopsy specimens should be reported with CPT Code 88305 with the unit of service corresponding to the number of separately identified biopsy specimens."*

The American Urological Association (AUA) says that it has contacted Palmetto to request that it rescind the new guideline. "Given that the original intent of the G codes were explained in a government regulation, the AUA believes that this coding guideline and the NCCI Policy Manual were misinterpreted, and should be rescinded," according to the AUA.

If Palmetto does not back down, its decision could be adopted by all Medicare carriers as well as private payers. As of September 14, no other Medicare contractor has published a specific policy on the issue.

Billing Firms Say Medicare's Intent Is Clear

Pathologists and urologists say that the NCCI guideline has been misinterpreted. However, APS Medical Billing (Toledo, OH) says that Palmetto's policy update indicates that it is Medicare's intent to require the use of the "G" codes for all prostate biopsy procedures anytime 5 or more separate specimens are reported. "It has been APS Medical Billing's experience that when an intermediary makes an announcement such as this others will follow. Similarly, PSA LLC. (Florence, SC) says that Palmetto's policy update has shed new light on the curious NCCI language, making it clear that it is Medicare's intent to require G0416 anytime five or more separate prostate biopsy specimens are billed, irrespective of the manner in which they were collected.

In-Office Urology Labs No Longer Viable

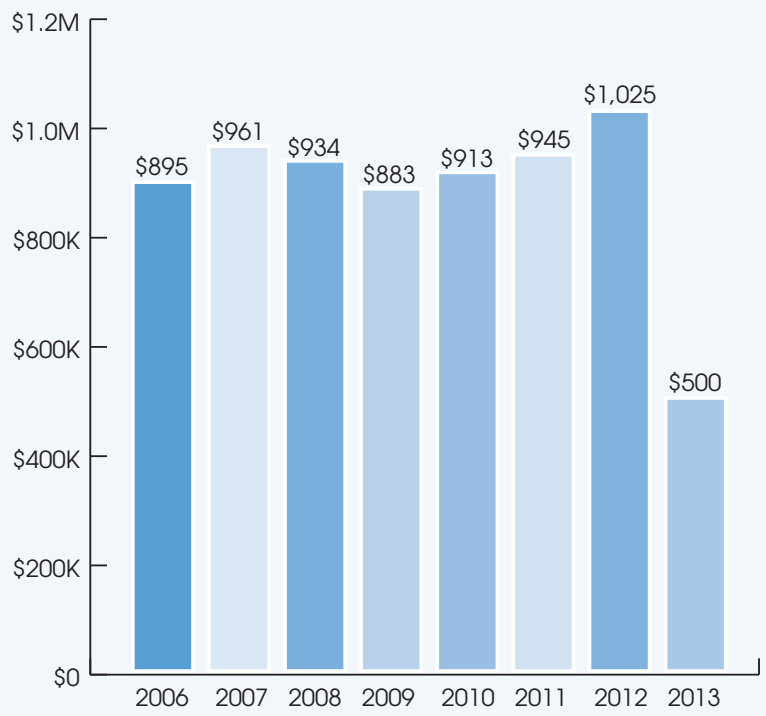
Palmetto's new reimbursement policy has essentially made it impractical for urology groups to operate their own pathology labs. Previously, *LE* had estimated that a 10-doctor urology group could

generate an annual pretax profit of $730,400 (or $73,040 per doctor) by operating their own pathology lab (see *LE*, April 2012, p. 8).

Under Palmetto's reimbursement cap, in-office pathology labs are now just a breakeven proposition for urology groups. With the profit incentive removed, many office-based urology labs are likely to close.

"It looks like CAP and ACLA won in their effort to shut down in-office pathology labs at urology practices," says Joe Plandowski, co-founder of In-Office Pathology LLC. He is advising these labs to shut down and send their work to outside pathology labs. However, these pathologists will now be doing the same amount of professional pathology work and incurring the same technical costs, but receiving only half the compensation. "If there ever was a Law of Unintended Consequences, it's at play right here," adds Plandowski.

Pathology Revenue* from Prostate Biopsies in United States ($ millions)



*Includes professional and technical service revenue

Source: Estimated by *Laboratory Economics* based on Part B claims for prostate biopsies (CPT 55700 and 55706)

ACLA's Mertz notes that the NCCI guideline came out in January 2012, whereas the Mitchell study wasn't released until April 2012. "So how could the study be responsible for the NCCI guideline?" he asks.

National labs that will be hurt by Palmetto's decision include Bostwick Labs, Quest's AmeriPath, LabCorp's Dianon, HealthTronics Laboratory and OurLab. In addition, any pathologist that reads prostate biopsy slides for Medicare patients in California, Nevada, Hawaii, North Carolina, South Carolina, Virginia or West Virginia will be taking a big pay cut.

How Big is the Financial Impact?

Laboratory Economics estimates that more than one million prostate biopsies are performed annually in the United States, each containing an average of 10 cores. This creates an estimated 10 million tissue samples for pathologists to interpret. This represents some $1 billion per year in professional interpretation fees (~$350 million) and technical services (~$650 million) to pathologists and labs. If other Medicare carriers and private payers follow Palmetto and cap prostate biopsy reimbursement, then pathologists and labs could lose up to $500 million per year in revenue.

UROLOGY GROUPS MAY RECONSIDER IN-OFFICE LABS

The profit margins that urology groups can earn by operating an in-office pathology lab are shrinking. This may cause some urology groups to dismantle their pathology labs and source this work back to independent labs and pathology groups.

Recent changes that have made in-office pathology less attractive include:

- CMS instituted new CPT codes that cut Urovysion bladder cancer testing by roughly 50%.
- Aetna is now requiring in-office pathology labs to be CLIA certified as well as accredited by CAP or The Joint Commission.
- Medicare carrier Palmetto GBA has issued clarification on coding of prostate biopsies that effectively cuts pathology reimbursement by nearly 50%.
- CMS is expected to reduce reimbursement for the technical component of CPT 88305 effective January 1, 2013 (*see page 9*).

Add it all up and it means that operating an in-office pathology lab is now, at best, a breakeven proposition for urology groups. The changes have created an opportunity for independent labs and pathology groups to win back business they lost to in-office labs over the past 10 years. *Laboratory Economics* estimates that there are more than 300 urology groups with labs that are up for grabs. The 30 largest groups are listed below:

Big Urology Groups with In-Office Pathology Labs

Name of Group	City	State	# Physicians
Michigan Institute of Urology	Saint Clair Shores	MI	55
UroPartners LLC	Chicago	IL	52
Urology Associates of North Texas	Dallas	TX	50
Chesapeake Urology Associates	Baltimore	MD	45
Carolina Urology Partners	Huntersville	NC	37
Georgia Urology	Atlanta	GA	37
Comprehensive Urology	Royal Oak	MI	36
Academic Urology of Pennsylvania	Rosemont	PA	35
The Urology Group	Cincinnati	OH	35
Urology of Indiana	Greenwood	IN	35
Urology Associates PC	Nashville	TN	33
Delaware Valley Urology	Marlton	NJ	32
Urology Specialty Group	Miami	FL	31
Urology Group of New Jersey	West Orange	NJ	31
Virginia Urology	Richmond	VA	30
Urology San Antonio	San Antonio	TX	27
Urology Health Specialists LLC	Philadelphia	PA	27
Central Ohio Urology Group	Columbus	OH	26
Arizona Urology Specialists	Phoenix	AZ	24
Assoc. Medical Professionals - Urology	Syracuse	NY	24
Western New York Urology Associates	Buffalo	NY	22
Urology Specialists of West Florida	Clearwater	FL	21
Metro Urology	St. Paul	MN	20
Garden State Urology	Whippany	NJ	20
Associated Urological Specialists	Orland Park	IL	19
Houston Metro Urology	Houston	TX	18
Kansas City Urology Care	Overland Park	KS	18
Associated Urologists of North Carolina	Cary	NC	18
Urology Austin	Austin	TX	17
The Urology Center of Colorado	Denver	CO	17

Source: *Laboratory Economics*

BE PREPARED FOR TECH COMPONENT CUTS IN 2013

The College of American Pathologists is warning pathologists and labs to be prepared for Medicare reimbursement cuts to the technical component of CPT 88305. CAP issued the warning in its STATLINE bulletin on August 30.

The magnitude of the anticipated cuts won't be known until early November when CMS releases the Final Physician Fee Schedule for 2013.

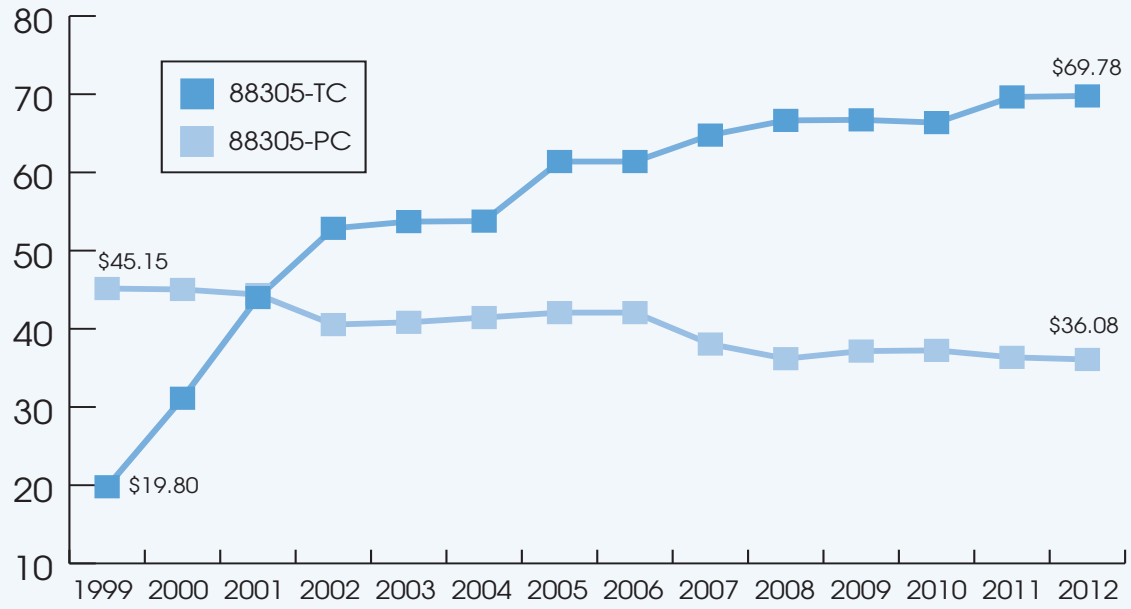
CMS indicated in its final rule last year that a stakeholder, presumably concerned about overutilization at in-office pathology labs, argued that "the typical cost…is approximately $18, but the PE RVUs for 2011 result in a national payment rate of $69.65 for the technical component of the service [for CPT 88305]." Prompted by this limited piece of information, CMS asked the AMA's Relative Value Upscale Committee (RUC) to review the direct practice expense (PE) and work values for the technical component of CPT 88305 (see *Laboratory Economics*, October 2011, p. 8).

Reports of over-utilization at in-office pathology labs at urology, gastroenterology and dermatology practices have put the spotlight on CPT 88305, which is the bread and butter procedure for pathologists. CAP, ACLA and ASCP have been lobbying CMS to fix loopholes in anti-markup/in-office ancillary services exception rules to eliminate the profit incentives that can lead to overutilization. Instead, CMS has chosen to focus on reducing pathology reimbursement rates.

Any significant cut in Medicare reimbursement for 88305-TC would reign in the construction of new in-office pathology labs at urology, gastroenterology and dermatology groups. Unfortunately, it would also be devastating to pathologists and labs.

Over the past 13 years, Medicare reimbursement for the technical component of 88305 has risen by an average of 10.2% per year. In comparison, the professional component of 88305 has decreased by 1.7% per year.

Medicare Reimbursement for CPT 88305: Technical vs. Professional Rates*



*National payment unadjusted for geographic practice cost differences.
Source: Medicare physician fee schedules, 1999 to 2012

LEICA TO BUY APERIO TECHNOLOGIES

Aperio Technologies (Vista, CA), which has been quietly up for sale for more than one year, has announced it is being sold to Leica Biosystems (Nussloch, Germany). Aperio has raised more than $50 million from venture capital investors since being formed in 1999. Its largest shareholders include Galen Partners, HLM Venture Partners and Advanced Technology Ventures; Dako Denmark also owns part of Aperio.

The sales price to Leica was not disclosed.

Evidently Aperio went through a cash crunch this summer. The company borrowed a total of $5.8 million from venture investors through three separate transactions between May and August, according to records filed with the Securities & Exchange Commission.

Aperio made a management change late last year by hiring David Schlotterbeck, retired CEO of CareFusion, to serve as chief executive. Aperio founder Dirk Soenksen gave up the CEO title but remained as president and "futurist." In hindsight, it looks like Schlotterbeck was hired to cut costs and prepare the company to be sold.

Soenksen pioneered the digital pathology industry. He invented key scanning technology, founded Aperio in his garage in 1999, and has been a passionate promoter of digital pathology ever since.

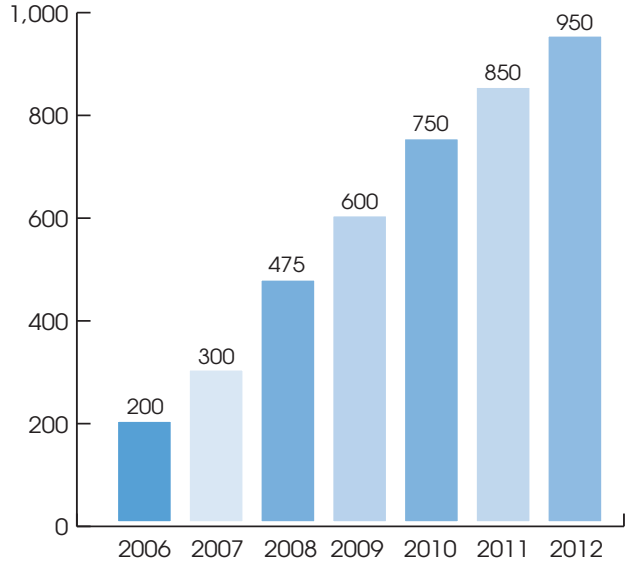
Aperio began marketing its first digital pathology system in 2003 and received FDA clearance for HER2 scoring in 2007. Today, the company reports more than 950 installed systems in over 30 countries, including 500 systems in hospitals and reference labs. The balance is in use at the 13 largest pharmaceutical companies as well as biotech and government research labs.

From Leica's standpoint, the acquisition of Aperio brings three key assets: 1) a proven slide scanner with patents; 2) FDA-cleared HER2, ER and PR image analysis tests; and 3) an instant customer base with 950 installed systems.

Leica is now faced with the challenge of increasing the clinical applications of digital pathology. Aperio has built a large base of customers; however, many of its reference lab and hospital clients are using digital pathology for specific low-volume applications. These include HER2 scoring, education/tumor boards and second opinions. Aperio has sold a lot of razors [i.e., scanners], but needs more recurring revenue from the sale of razor blades [i.e., bigger test menu], notes *Laboratory Economics*.

Finally, *LE* notes that the sale of Aperio will remove the last major standalone digital pathology firm from the market. BioImagene was acquired by Roche/Ventana for $100 million in September 2010. Dmetrix was downsized into a small R&D focused company in 2009-2011. Three smaller independent firms remain: DigiPath Solutions (Spring, TX), MikroScan Technologies (Vista, CA) and DigiPath Inc. (Henderson, NV).

Aperio's Worldwide Installed Slide Scanners



Source: *Laboratory Economics* from Aperio press releases and JP Morgan presentation

PUBLICLY TRADED LABS GREW 3.1% IN FIRST HALF

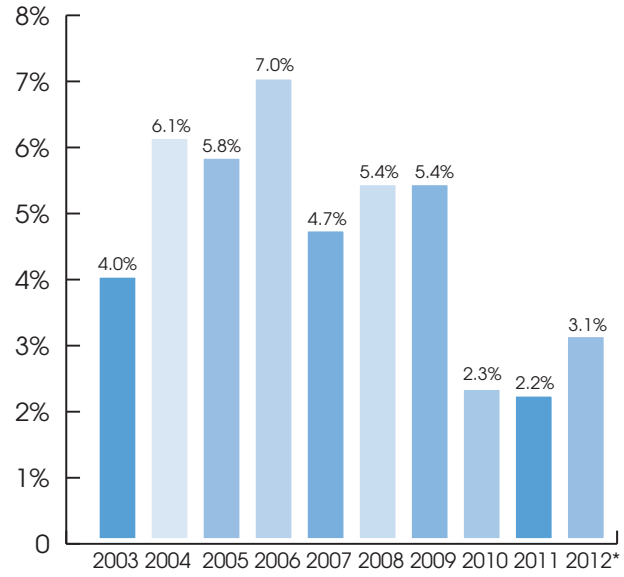
Twelve publicly-traded lab companies grew their revenue by an annualized rate of 3.1% to $8.1 billion in the first six months of 2012 (after adjustments for acquisitions), according to financial reports collected by *Laboratory Economics*. This rate of growth is slightly higher than the 2.2% recorded in full-year 2011.

Revenue growth was fastest at three cancer testing labs: NeoGenomics, up 59.7%; Myriad Genetics, up 25.2%; and Bio-Reference Labs, up 20% (after adjusting for a small acquisition).

Other lab companies growing organically by double digits included Combimatrix, up 18.6%; Genomic Health, up 15.3%; and Medtox Scientific (now part of LabCorp), up 12.5%.

Excluding Quest Diagnostics and LabCorp, the 10 smaller publicly-traded labs grew by an average of 13.5% in the first six months of 2012.

Revenue Growth of Publicly-Traded Labs



*Annualized through June 30, 2012

Source: *Laboratory Economics*

Revenue Growth at 12 Publicly-Traded Lab Companies ($000)

Company	First-Half Revenue 2012	First-Half Revenue 2011	Reported Change	Pro Forma Change*
Quest Diagnostics	$3,843,300	$3,724,778	3.2%	1.0%
LabCorp	2,846,700	2,432,000	17.1%	1.0%
Sonic Healthcare USA	404,000	395,700	2.1%	2.1%
Bio-Reference [1]	313,307	259,317	20.8%	20.0%
Myriad Genetics	262,742	209,786	25.2%	25.2%
Aurora Diagnostics	144,842	130,470	11.0%	-0.1%
Genomic Health	116,098	100,656	15.3%	15.3%
Medtox Scientific	58,557	52,028	12.5%	12.5%
NeoGenomics	30,771	19,271	59.7%	59.7%
Enzo Clinical Labs [2]	29,365	26,087	12.6%	12.6%
Psychemedics	13,106	12,228	7.2%	7.2%
Combimatrix	2,575	2,172	18.6%	18.6%
Total, 12 companies	$8,065,363	$7,364,493	9.5%	3.1%
Total, 10 companies (excluding Quest and LabCorp)	$1,375,363	$1,207,715	13.9%	13.5%

*Pro forma change is estimated by Laboratory Economics after adjustments for acquisitions.

[1]Bio-Reference's revenue is for six months ended April 30, 2012; [2]Enzo's revenue is for lab services only for six months ended April 30, 2012. Source: *Laboratory Economics* from company reports

LAB STOCKS UP 27% YEAR TO DATE

Ten lab stocks have risen by an unweighted average of 27% so far this year. The combined market capitalization for the group is up 5% to $23 billion. In comparison, the S&P 500 Index is up 17% and the Nasdaq is up 22% year to date through September 14. Shares of Medtox Scientific, which has been acquired by LabCorp, have performed best (up 92%). In terms of valuation, Quest Diagnostics is currently trading at 1.3x its annual revenue and 8.6x its trailing EBITDA (earnings before interest, taxes, depreciation and amortization). LabCorp trades at 1.6x annual revenue and 8.2x trailing EBITDA.

Company (ticker)	Stock Price 9/14/12	Stock Price 12/30/11	2012 Price Change	Market Capitalization ($ millions)	Enterprise Value/ EBITDA	Price/ Sales
Bio-Reference (BRLI)	$28.14	$16.27	73%	$779	8.9	1.2
CombiMatrix (CBMX)	0.68	2.00	-66%	7	NA	1.5
Enzo Biochem (ENZ)	1.96	2.24	-13%	76	NA	0.7
Genomic Health (GHDX)	32.96	25.39	30%	1,003	58.6	4.4
LabCorp (LH)	90.99	85.97	6%	8,726	8.2	1.6
Medtox Scientific (MTOX)*	27.00	14.05	92%	242	16.6	2.1
Myriad Genetics (MYGN)	27.53	20.94	31%	2,249	9.5	3.6
NeoGenomics (NGNM)	2.62	1.40	87%	118	26.0	2.1
Psychemedics (PMD)	11.10	9.10	22%	59	8.9	2.3
Quest Diagnostics (DGX)	61.54	58.06	6%	9,770	8.6	1.3
Unweighted Averages			27%	$23,029	18.1	2.1

*Medtox was acquired by LabCorp on July 31 for $27 per share. Source: Bloomberg

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