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From the Desk of R. Lewis Dark...

THE DARK REPORT

RELIABLE BUSINESS INTELLIGENCE, EXCLUSIVELY FOR MEDICAL LAB CEOs / COOs / CFOs / PATHOLOGISTs

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Commentary & Opinion by...

R. Lewis Dark

Founder & Publisher

Choosing a Eulogy for SBCL

What is an appropriate eulogy for **SmithKline Beecham Clinical Laboratories** (SBCL), soon to be acquired by **Quest Diagnostics Incorporated**? *(See pages 2-5.)* I would venture to say that even SBCL's most aggressive competitors would acknowledge that it is a fine laboratory organization, noted for quality, integrity, and consistent service to its clients.

Despite those characteristics, SBCL no longer survives as free-standing business. It is important to recognize this fact because a primary function of any business is to survive and continue into the future. On some level, at some point in time, SBCL's opportunity to succeed as stand-alone business enterprise slipped away. Despite the resource base of a $1.5 billion per year business, its executive team didn't weather the storms of managed healthcare and corporate politics within the SmithKline organization.

I ponder the consequences of SBCL's disappearance as an independent laboratory company. This development affects a sizeable number of laboratories in the United States. For example, it is recognized that SBCL provides more reference testing to more hospitals than any other laboratory provider in the country. Many hospital labs are concerned about this merger. They recall the effects of other acquisitions and how interruptions in reference testing services affected their hospital laboratories.

Next, consider those laboratories, both hospital-based and commercial labs, which compete against SBCL for physicians' office testing. Obviously many are sharpening their sales swords and hoping to capture big chunks of SBCL's business should Quest Diagnostics make any miscues during efforts to integrate, consolidate, and restructure its two parallel lab systems.

Against this background, what is an appropriate eulogy for SBCL? I would be out of character if I didn't choose to emphasize the fact that change is now the dominant shaping force in the laboratory industry. We can quibble about whether SBCL's business strategies during the last ten years were the best ones.

But we can't quibble about the fact that change was a constant theme. It was radical change, It was intense change. It rendered many good management plans worthless almost overnight. With SBCL's disappearance as a major player in the lab industry, maybe the appropriate eulogy is to remind ourselves that strength can only come from renewal and renewal can only result from a willingness to recognize change, accompanied by a bias for acting upon that knowledge to provide stability for the laboratory and its staff. TDR

Quest and SBCL Expect Merger Date Of July 2

Lab industry "big bang" will create behemoth national laboratory company

CEO SUMMARY: After months of waiting and planning, executives at Quest Diagnostics Incorporated believe that July 2, 1999 will be the date when their acquisition of SmithKline Beecham Clinical Laboratories becomes official. During the month of July, expect a flurry of activity at Quest Diagnostics as managers of the combined laboratory company work to harvest the potential benefits of this industry mega-merger.

NOT ONLY IS IT THE super-marriage of the century for the clinical laboratory industry, but the wedding ceremony may happen by Friday of this week.

Executives at **Quest Diagnostics Incorporated** indicate to THE DARK REPORT that, as of press time, they still expect their acquisition of **SmithKline Beecham Clinical Laboratories** (SBCL) to become effective on July 2.

Upon completion of the acquisition, the "new" Quest Diagnostics will have $3 billion per year in revenues and employ more than 25,000 people. Wall Street and the investment community remain positive about this merger.

During June, Quest Diagnostics successfully completed the financing arrangements necessary to complete the transaction. To acquire SBCL, it will pay **SmithKline Beecham, Ltd.** $1.025 billion in cash and 12,564,336 shares of stock, worth about $399 million at a price of $25.50 per share.

Shareholders of Quest Diagnostics will gather tomorrow, June 29, at the Intercontinental Hotel in New York City to vote on the merger. It is expected they will approve the acquisition. Baring any unforeseen delays, by Friday, July 2, Quest Diagnostics will be the owner of SmithKline Beecham Clinical Laboratories.

Once Quest Diagnostics takes title to SBCL, it must move swiftly to realize the potential benefits of the acquisition. To this end, an integration team has been assembled under the direction of James Chambers,

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President for Corporate Services at Quest Diagnostics. This integration team has established working groups at both lab companies to identify issues which need immediate attention once the merger is completed.

Public Silence About Plans

Company officials from both laboratories have maintained a public silence about post-merger plans. This is due to **Securities and Exchange Commission** regulations which govern forward-looking statements in advance of certain corporate activities, including stock offerings and acquisitions.

However, general statements have been made about the basic strategies Quest Diagnostics intends to pursue after the merger. These statements indicate that company executives intend to avoid the merger mistakes of their predecessors earlier in the decade. Instead of rushing to consolidate testing as fast as possible wherever possible, Quest Diagnostics will follow a careful path.

First, during the initial 24 months following the merger, Quest Diagnostics will concentrate on closing redundant facilities such as patient service centers, stat labs, courier hubs, and a number of the SAMSHA-certified drugs of abuse testing facilities operated by both lab systems.

Study Individual Markets

In the short term, this avoids tinkering with the large regional laboratories which exist side-by-side in cities like Philadelphia, Detroit, and Chicago. It gives Quest Diagnostics the time to study individual markets and understand the best ways to consolidate testing without alienating long-time, loyal clients of either SBCL or Quest.

Further, THE DARK REPORT believes that Quest Diagnostics intends to use the months following the merger to carefully evaluate and select the best management talent from each laboratory company. One of Quest's goals is to forge a common company culture and that requires time to accomplish.

As noted on these pages in past years, Ken Freeman, the Chairman and CEO of Quest Diagnostics, is well-schooled in the principles of quality-based management. He appreciates that the success of any laboratory organization rests more on the capabilities of its staff and leaders than on any technical or scientific advantage. This is another reason why Quest will devote the post-merger months to evaluating people and building solid management teams from the best of both companies.

Pursue "Best Practices"

The second area of significant savings that Quest Diagnostics intends to pursue is something we will call "best practices." Quest wants to identify the best management processes within each system, and introduce them throughout the combined laboratory company.

For example. Quest has specifically noted that, between 1996 and 1998, it reduced the number of requisitions with incomplete billing information from 16% to 6%. This helped bad debt expense shrink to 6.1% at the end of 1998.

In contrast, Quest notes that SBCL estimates the percentage of requisitions lacking complete billing data is around 15%. SBCL's bad debt expense during 1998 was 9%. If Quest can get SBCL's business down to similar ratios, it will pick up $45 million per year from reduced bad debt expense.

There are similar operational areas where the opportunity exists to transfer the best practices of one lab over to the other. This activity will occur in tandem with the operational restructuring and consolidation of the two laboratory systems.

Tale of the Tape: Quest & SBCL Remarkably Similar

Some of the information presented here has never been made public before. Careful study of the data below shows that Quest Diagnostics Incorporated and SmithKline Beecham Clinical Laboratories already have much in common. In particular, their revenue streams, cash flows, and net incomes are uncannily similar. With combined revenues of $3 billion and 100 million requisitions per year, it will be a challenging task for Quest Diagnostics Incorporated to combine the two companies without any serious miscues.

Rev/Income:	Quest	SBCL
Revenue	$1.45 bil	$1.58 bil
Adj EBITDA	$158.6 mil	$158.2 mil
Net income	$26.8 mil	$25.9 mil
Bad debt exp	$89.4 mil	$145.0 mil

Business Mix:	Quest	SBCL
Routine testing	84%	85%
Esoteric testing	13%	12%
Clinical trials	<1%	1%
Other testing	2%	2%

Market Segments:	Quest Diagnostics		SB Clinical Labs	
Physician Office	80%	$1.16 bil	77%	$1.22 bil
Hospital	13%	$189 mil	19%	$300 mil
Drugs of Abuse	7%	$102 mil	4%	$ 63 mil

Comparison of Infrastructure and Staff

Quest Diagnostics		SB Clin Labs
15,000	# Employees	12,000
14	# Regional labs	23
140	# Stat labs	70
7	# SAMSHA labs	6
800	# Service centers	600
850	# Customer/ patient service reps	750
2,000	# Couriers	1,500
550	# Sales people	350
50 million	# Requisitions/year	50 million

Notes:

1. *Esoteric testing at Quest is done at its Nichols Institute facility in San Juan Capistrano, California. Esoteric testing for SBCL is done at its National Esoteric Testing Center in Van Nuys, California.*
2. *National reference testing for Quest is done at its laboratory in Teterboro, New Jersey. National reference testing for SBCL is done at its laboratory in King-of-Prussia, Pennsylvania.*
3. *Both companies operate laboratories in Mexico City. SBCL also operates a laboratory in London, England to provide testing for clinical trials.*

Source of Data: Company filings, public information.

Quest Diagnostics Announces Line-Up of Post-Merger Senior Executive Team

After the merger, these eight individuals will serve as the "Chairman's Council" for Quest Diagnostics Incorporated

Ken Freeman
Chairman & CEO

Surya N. Mohaptra, Ph.D. President & COO	**Vijay Aggarwal, Ph.D.** President, Quest Diagnostics Ventures
James D. Chambers President, Corporate Services	**Robert Hagemann** Corporate VP, Chief Financial Officer
Michael E. Prevoznik Corporate VP, Legal & Compliance	**Gerald C. Marrone** Corporate VP, Chief Information Officer
Julie A. Clarkson Corporate VP, Communications & Public Affairs	**Richard L. Bevan** Corporate VP, Human Resources

None of this will come cheap. Quest Diagnostics is borrowing $1.18 billion to fund the purchase, provide capital for restructuring, and maintain necessary working capital. This debt will have to be serviced. Assuming a rate of 9% per year on this debt, Quest will pay $109 million per year in interest, not including any reductions to principal that might be required.

Significant Debt Service

Meanwhile, Quest Diagnostics estimates that, at the end of three years, it can realize savings of $100 million per year between the two laboratory organizations. During this time, it expects to incur acquisition and integration charges of $190 million for 1999. It also estimates that another $200 million in integration charges will accrue in the years following the merger.

In acquiring SBCL, Quest Diagnostics is undertaking an immense task. The size and scale of this laboratory consolidation project has never before been attempted. Although the financial community is generally optimistic that Quest Diagnostics can successfully pull off this acquisition, it will not be an easy task.

The biggest risk to the acquisition is loss of existing client accounts. On one hand, the new management team at Quest must skillfully implement restructuring plans in such a way as to maintain good client service. Any less than that, and clients will switch to competitors.

On the other hand, a swarm of competitors are circling around the existing clients of Quest and SBCL. These range from commercial labs like **Laboratory Corp. of America** and **Unilab**, to reference testing labs such as **ARUP**, **Specialty**, and **American Medical Labs**.

Everybody wants a piece of this deal. Management at Quest Diagnostics will be hard-pressed to keep the wolves from their clients even as they turn their attention on internal restructuring and consolidation. TDR

For further information, contact Robert Michel at 503-699-0616.

Surprise Merger Changes Cytology Marketplace

AutoCyte and NeoPath are joining forces to offer a unified automated cytology solution

CEO SUMMARY: Expect the merger of AutoCyte, Inc. and NeoPath, Inc. to inaugurate a new market cycle for automated cytology systems. FDA approval of AutoCyte's liquid preparation system, called PREP™, sets the stage for intensified marketing battles between the AutoCyte/NeoPath consortium and Cytyc Corporation. Clinical laboratories should benefit from this competition.

When the recently-announced merger between **AutoCyte, Inc.** and **NeoPath, Inc.** occurs sometime this fall, it will recast the market for automated cytology systems in fundamentally different ways.

The merger brings together two companies with complementary products, shared philosophy, and a realistic attitude toward how laboratories view the cost-benefit equation for automated cytology systems.

This merger can also be expected to put additional pressure on **Cytyc Corporation**, manufacturer of the ThinPrep® Pap smear preparation system. Although Cytyc has a head start in marketing its product, it is expected that the AutoCyte/NeoPath alliance will offer a modular cytology system with significant cost advantages over Cytyc's product.

"Single" Cytology System

"If there is one lesson that we have learned at NeoPath during the last two years, it is that laboratories are most interested in a 'single' system for handling the preparation and primary screening of Pap smears," stated Alan Nelson, Ph.D., Executive Chairman of NeoPath. "That's a lesson that was not lost on AutoCyte. It caused us to begin mutual explorations on how our two companies could work together."

System In The Marketplace

Neopath already has the only fully automated primary screening system (called AutoPap®) in the marketplace. It was introduced last year after it gained FDA approval. AutoCyte has developed an automated liquid preparation system (called PREP™) and is marketing a pathologist's workstation with telepathology capability.

PREP was approved by the FDA for use in Pap smear preparation this month. AutoCyte and NeoPath are doing clinical trials to demonstrate the efficacy of PREP and AutoPap as an integrated instrument package.

"We expect to demonstrate that laboratories using our combined system for Pap smear preparation and screening can boost the quality of care and laboratory productivity at an acceptable cost," noted Dr. Nelson.

Free Market's "Invisible Hand" Separating Automated Cytology Winners from Losers

Success in pioneering automated cytology technology seems to be a moving target. Here's THE DARK REPORT's take on current standings in the win/loss column.

LOSING

Neuromedical Systems, Inc.
Gone from the game. Chapter 11 Bankruptcy earlier this year. Its PapNet assisted screening station never got past first base.

Accumed International, Inc.
Remember Acel and Tracel? Few people do. These computer-aided microscopy systems failed to excite cytotechs...or sell.

MorphoMetrix Technologies
Plans for an automated Pap Smear screening system may be waylaid by AutoCyte/NeoPath's dominant patent position.

WINNING

AutoCyte, Inc.
It now rules the patent and intellectual property domain for automated cytology. Its PREP System has FDA approval.

NeoPath, Inc.
Joining AutoPap with PREP is a master stroke of NeoPath. It also shares sole ownership of the intellectual property...wherein lies real value.

Cytyc Corporation
First to market with a liquid prep system. Its cash flow is improving and it has time to build market share before AutoCyte's PREP arrives.

"The reason is that an automated liquid preparation system, married to an automated primary screening system, allows the individual technologies to combine in synergistic ways. There is evidence that the whole becomes more than the sum of the parts.

"For example, a Pap smear prepared using liquid preparation technology produces a slide which offers the automated screener less extraneous material and a more uniform layer of cervical cells," he continued. "This means the automated screener can achieve faster throughput and potentially better accuracy when compared to the traditional Pap smear."

How much faster? Potentially 100%, according to Dr. Nelson. "Currently, the AutoPap primary screening system can process at least 40,000 traditional Pap smear slides per year," he observed. "Early evidence indicates that a liquid prep Pap smear allows AutoPap to process up to 80,000 slides per year. Clinical trials are under way to determine whether, and by how much, the combined PREP/AutoPap system can improve clinical diagnosis of the slides. Those studies will be published when completed and submitted to the FDA as a supplement."

Trump Card of Cost Per Slide

Another trump card which may give the merged AutoCyte/NeoPath consortium a market advantage is its cost per slide. Cytyc advertises a retail list price for ThinPrep of $9.75 per slide. Although Dr. Nelson declined to discuss a cost per slide for the PREP/AutoPap system, knowledgeable sources believe that a retail price for both a combined prep and screen on the AutoCyte/NeoPath system will

be considerably less than Cytyc's suggested retail price of $9.75 per slide.

If that proves true, then it means AutoCyte/NeoPath can bring an integrated, automated cytology solution to market which can both prep and screen a Pap smear at an affordable price per slide.

Analyzing the merger between AutoCyte and Neopath, THE DARK REPORT sees five business factors at play.

First, the combined company has a lock on all the patents and intellectual property involved in automated cytology screening. (It acquired **Neuromedical Systems, Inc.'s** patents from the bankruptcy court earlier this year.)

"Our shared intellectual property now includes 80 granted patents," said Dr. Nelson. "There are another 30-35 patents pending. These patents have value beyond their applications in cytology. This is a long term asset which should continue to appreciate."

Second, the combined company will offer "one-stop shopping" to laboratories. Its PREP/AutoPap system is an integrated solution for automating both Pap smear preparation and primary screening. There is no competitor on the horizon which can match this.

Third, its integrated system may be priced so that laboratories can prepare and screen a Pap smear at a price per slide which is almost half of existing liquid preparation systems. This would be a significant competitive advantage.

Eliminate Redundant Costs

Four, both companies can eliminate redundant overhead costs. This reduces their rate of cash burn and preserves their existing capital base.

"You may be aware of published information that indicates both our companies have already reduced staff," stated Dr. Nelson. "The staffing and overhead synergies were compelling. At least $6 million in annual savings were identified during the first survey. There is also the possibility of additive revenues from the merger by year-end, assuming the merger can occur as early as September."

Fifth, both companies understood that without the merger, they would be fighting for a market which is very small and will not grow rapidly. Rationally, joining forces insures the survival of the combined company.

Beneath the surface, the merger of AutoCyte and NeoPath reflects sophisticated shifts in business strategies. With Neuromedical Systems, Inc. now out of the marketplace, AutoCyte/NeoPath will only have Cytyc as a competitor, and only for the preparation half of the Pap smear testing process.

Slow Acceptance By Labs

Clearly the merger of the two companies was a consequence of the slow acceptance by clinical laboratories of the current automated Pap smear technologies in the marketplace. Both companies know it will take considerable time and money to build demand for their products.

On the other hand, high-volume laboratories like **SmithKline Beecham Clinical Laboratories**, **Unilab Corporation** and **Kaiser Permanente–Northern California** continue to incorporate the AutoPap Primary Screening System in their cytology programs. They are accumulating ever-increasing volumes of data about clinical outcomes and costs.

The fact that these labs continue to increase their use of automated Pap smear screening indicates that cytology's future lies with automated procedures, not with manual procedures.

THE DARK REPORT predicts that ongoing developments in reimbursement will serve to support this technology, particularly as successive generations improve clinical outcomes at decreasing costs. **TDR**

For further information, contact Alan Nelson, Ph.D. at 206-867-2422.

CEO SUMMARY: Here's an integrated healthcare system that's pushing its clinical laboratory across traditional barriers between physician's office and clinical lab. At PennState Geisinger Healthcare, a fast-growing health system located in rural Pennsylvania, point-of-care testing is now an essential feature of the regional clinics and physician offices. The laboratory embraced this development and is now the "information manager," gathering laboratory data and converting it into useful clinical information.

MORE POINT-OF-CARE TESTING AHEAD!

PennState Geisinger Building "Distributed Lab" Around POCT

IN RECENT YEARS THERE HAS BEEN an ongoing and vociferous debate between the merits of the core laboratory versus point-of-care testing.

For laboratorians wedded to the traditional model of a centralized laboratory safely under the control of clinical pathologists, Ph.D.s, and medical technologists, discussion about pushing lab tests into the point-of-care and near patient settings is disturbing.

Yet it is a firm conviction of THE DARK REPORT that laboratory regionalization will go hand-in-hand with increased testing at the point-of-care. Both trends must be viewed as complementary and necessary.

Although this may seem a futuristic concept, a limited number of laboratory organizations are already moving towards exactly this type of business model.

PennState Geisinger Health System of Danville, Pennsylvania is a leader in this area of clinical laboratory evolution. Because Penn State Geisinger is an integrated delivery system, its laboratory division is organized specifically to serve the needs of an organization which provides the entire continuum of care, from cradle to grave.

"Our laboratory now looks at point-of-care testing as an opportunity, not a threat," said Jay Jones, Ph.D., "What better way for the laboratory to know more about our customers at the point of care than to take responsibility for point-of-care testing?"

Dr. Jones is Director of Health Group Laboratories within PennState Geisinger's laboratory division. He made these remarks at the *Executive War College* in New Orleans last May.

"PennState Geisinger is the largest rural health maintenance organization in the United States," noted Dr. Jones. "Our insurance plan provides care to more than 250,000 people. We operate three hospitals, have 83 physician office labs in 40 counties, and we own rehabilitation facilities."

To service this far-flung network of healthcare sites, a unified laboratory organization called PennState Geisinger Medical Laboratories (PSGML) was created. "Because of our multi-level menu of services, I use the term 'distributed laboratory' to differentiate us from traditional laboratory models," observed Dr. Jones.

Today's PSGML is the result of 15 years of continual change to the laboratory infrastructure serving the PennState Geisinger Health System. "I like to say that our laboratory organization has undergone a migratory process," observed Dr. Jones. "This process generated widespread changes to how our laboratory is organized. Point-of-care is only one segment of these changes.

"From a broader perspective, we had to break the hospital mentality and the factory mentality to operating laboratories before we could embed our laboratory services into the integrated health system," he continued. "This required us to move testing outside of centralized laboratory nodes to where clinicians really need us. We've identified that place where clinicians need us to be at the point of care."

Fascinating Transition

"During this evolutionary process, our distributed laboratory experienced a fascinating transition," recalled Dr. Jones. "New technology and automated processes are regularly introduced into our core laboratory sites. As this occurs, medical techs 'displaced' by such automation migrate outward into physician office sites operated by our integrated healthcare system. As a result, we keep the experience and talents of our med tech staff, but they

make their contributions away from a core lab setting, nearer to the physician.

"The concept of the distributed laboratory means that PSGML is made up of a core lab for the system, on-site labs at the hospitals, and POLs in the outreach market," Dr. Jones noted. "Our laboratory network is expanding beyond a traditional mix of core labs, rapid response labs, and POLs. We are beginning to interact in a variety of clinical settings, exactly the types of places where laboratorians have not historically been found.

"These settings include the classical concept of hospital bedside point-of-care testing, but they expand beyond this, going into outpatient clinics, nursing homes, and home healthcare visits," he added. "For example, as respiratory therapists administer home oxygen, we are exploring how to get state licensure for them to perform in-home blood gas testing with devices like I-Stats.

"Given the variety of clinical activities for which PSGML performs testing, the common glue binding together our laboratory system is information," said Dr. Jones. "We developed data links so that all sites generating laboratory test results can feed those results into our LIS. We continue to refine the capabilities of those data links. At the same time, lab test data is available to authorized individuals anywhere in the PennState Geisinger Health System."

Capturing Lab Test Results

Jay Jones describes a capability not found at many integrated laboratories. The ability to feed lab test results into the master LIS, regardless of whether the test was performed in the central laboratory or with a point-of-care instrument

"For example, we selectively placed I-Stats in the operating room," commented Dr. Jones. "This has been successful. It is our experience that this creates a paperless flow of information. The test is performed in the OR and the results are later batch-uploaded. Surgeons really like this arrangement and they've given the laboratory a lot of support and encouragement in rolling out this program.

"Although it has been difficult to measure and quantify outcomes," noted Dr. Jones, "there have been comments by pediatric surgeons that this testing, done in the OR, has saved several lives during the last few years.

"As mentioned, PSGML is doing a lot of the standard hospital point-of-care testing about which so much has been written," he continued. "What I call 'new' point-of-care testing happens outside the hospital in a very different clinical environment."

Most Rapidly Expanding

"Such POC testing occurs in our health group laboratories, located in the primary care and specialty care clinics throughout our system," added Dr. Jones. "These are the most rapidly expanding and challenging aspects to the integration of laboratory services with clinical providers."

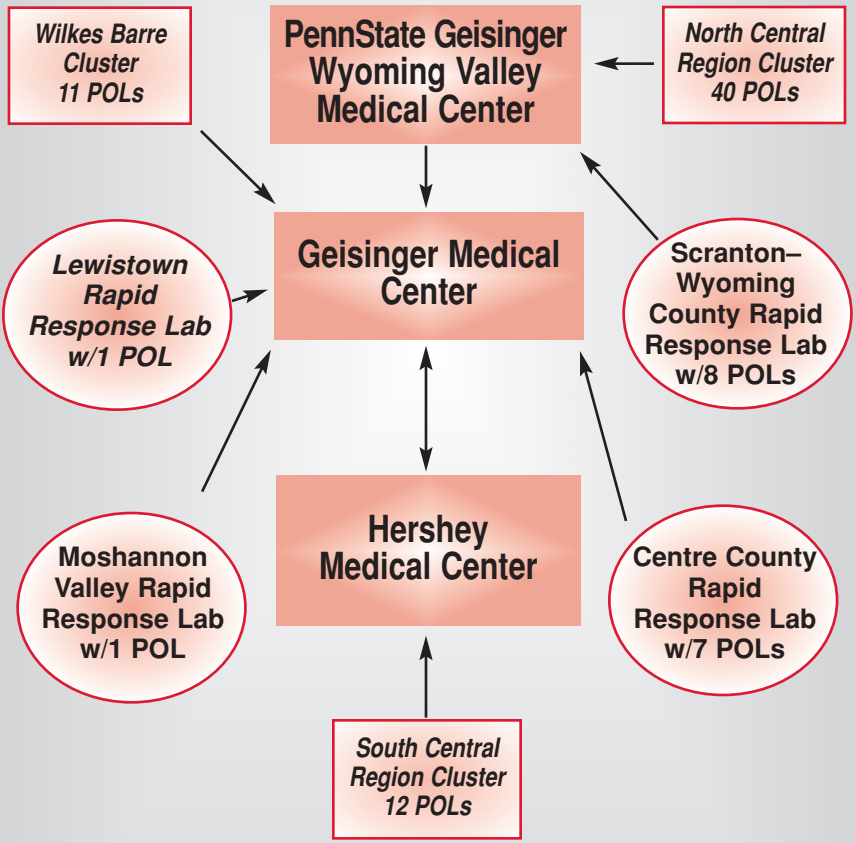
Compared to hospitals, clinics provide a different variety of issues for the laboratory. "First, we made a conscious effort to centralize complex testing. What remains at the clinic sites are waived tests, also known as Level One tests in Pennsylvania," explained Dr. Jones. "As a result, 75% of our practice sites operate as waived sites.

"Next, we debunked the myth that if you advertise that you will do POC testing, then everybody demands it; vendors drop boxes off at numerous locations; and costs skyrocket," observed Dr. Jones. "We had the totally opposite experience. For one thing, nurses are too busy to entertain the notion of doing another task.

"The reality is that most clinics have such a workload that their motive

PSG's "Distributed Laboratory" Concept Emphasizes Point-Of-Care Testing Abilities

AS AN INTEGRATED DELIVERY SYSTEM, PennState Geisinger's administration has consistently endorsed rational expansion of laboratory testing activities which directly support and enhance clinical services. That is why point-of-care testing is not a political football, but an opportunity for the laboratory organization to expand its value-added services to clinicians.



Laboratory Organization For PennState Geisinger Health System

Three Hospitals—83 POLs–Seven "Clusters"—One LIS (Sunquest) on WAN—Standardized POCT methods—Emerging CPR on WAN

is now to gain the benefits of POC testing without having to take responsibility or control over the process," Dr. Jones continued. "For that reason, our laboratorians have the full support of clinical staff in providing the necessary lab services."

Many Clinical Areas Use Point-Of-Care

PennState Geisinger uses point-of-care testing in a wide variety of clinical settings. The laboratory is expanding these boundaries where testing needs are identified, often without predefined authority. Here's a partial list:

- *Bedside glucose meters*
- *Intensive care (neonate, cardiac, etc.)*
- *I-Stats in intensive care areas*
- *Trauma service*
- *Intraoperative*
- *Outpatient clinics*

Expanding into:

- *Nursing Homes*
- *Home Visiting Nurses*
- *Health Fairs*
- *Self-testing*

According to Dr. Jones, lab professionals maintain all testing done at the waived sites. This includes quality control, proficiency testing, and ongoing administration of laboratory testing performed at each site.

"Our laboratorians who work at these sites become involved in more than just laboratory testing," Dr. Jones stated. "For example, some multiphasic med techs are doing radiology in addition to laboratory. As they interact with clinic staff, they get involved in things like OSHA compliance.

"It ends up that they help out in systems analysis, occasionally doing home phlebotomy and supporting home testing as that technology develops within our organization," he continued. "Most importantly, our laboratorians have become a personal communications link with each practice site. We've started to call them the 'fingertips' of the laboratory, touching our customers at the point of care."

Information capture is probably the most important part of making the Health Group Laboratories' POC network successful. "Every laboratory has the problem of collecting the data necessary to process the test request," Dr. Jones said. "Our laboratory is no different than others. We are learning that, as testing moves farther into the point-of-care environment, 90% of what we do is gathering necessary data and 10% of what we do is actual testing.

"Point-of-care is a data-rich environment," he added. "By collecting the right types of data, we can take raw laboratory test results and develop some very useful clinical information."

Blood Gas Testing

Dr. Jones offered the example of having I-Stat units in the physicians' offices for blood gas testing. "An out-of-system laboratory typically charges $85 and some accessory costs to do blood gases. So even if only used twice a week, an I-Stat saves a lot of money where out-of-system cost avoidance is an issue.

"Also, take a situation where the physician sees a child with a headache in the clinic," said Dr. Jones. "If the physician thinks the child is dehydrated and sends him to a local emergency room, by the time the child's electrolytes are done and you add up the IV therapy, room charge, and professional charges, that simple encounter may easily run $300 to $500 dollars. Once again, having an I-Stat in the physician's office can save a good chunk of

money, not to mention improving the care provided to a patient."

Another area that will expand the lab's ability to provide useful information is the system-wide computer network which is constantly being upgraded.

"Currently PennState Geisinger is installing provider network PCs in examining rooms and physicians' offices. It is an ambulatory care practice system called Epicare. This will take five years and $20 million to accomplish," he observed. "It is more of a word processing tool and lacks the robustness to easily handle laboratory tables for assays, test results, reference ranges, etc."

Seamless Flow Of Lab Data

"For that reason, our laboratory organization is stretching to create a seamless flow of lab data and information back and forth between our LIS and the Epicare system," stated Dr. Jones. "This is important, because we understand that good data in the data base is like money in the bank."

"Over time, this data will be turned into information. That information, in turn, will be used to develop a knowledge base," he predicted. "This is where the laboratory gains an essential role in the integrated clinical environment. This knowledge base supports evidence-based medicine."

Dr. Jones' comments about the PennState Geisinger Laboratory Group should be evaluated against several facts about the PennState Geisinger Health System.

Cost To The System

First, as an integrated delivery system providing total care to 250,000 people, the health system considers every expenditure of money to be a cost to the system. That old fee-for-service mentality of making money every time there is an office visit or a laboratory test has been replaced by a system-wide awareness by all employees that every clinical service is a cost to the healthcare system.

This has a big benefit to the laboratory. When laboratory administrators make a rational case that delivering lab testing through point-of-care solutions can be cost-effective while improving the quality of care, they have a receptive audience among both system physicians and administrators.

Lab Changes Were Mandated

Second, the administration at Penn State Geisinger has been very progressive during the 1990s. It has mandated change to the laboratory, such as consolidation of labs between the hospitals (1993), common LIS capability (1990), and standardization of instruments, assays, and procedures (1986).

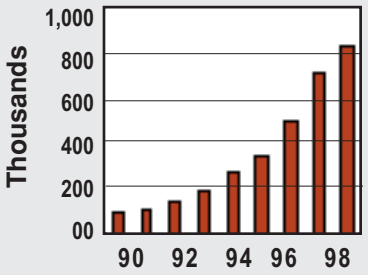
Leadership by the administration has pushed the laboratory to restructure itself. It has incorporated new methods of solving system challenges on a much faster time line than other hospital systems around the country.

Third, the common information system platform that the health system has been steadily developing has actually

Test Volume Growth From Doc's Offices

As this chart illustrates, there has been regular growth in tests referred to the PSG laboratory division from physicians' offices.

Tests Referred From HGL Sites



made possible the laboratory's campaign to push testing into various point-of-care settings. It means that test data, once input into the system, flows back to the laboratory where laboratorians convert it into value-added information for the clinicians.

Fourth, it should be noted that point-of-care testing is not used in isolated settings. Quite the contrary, HGL made it a deliberate strategy to imbed point-of-care testing into the clinical continuum.

Measuring POCT Costs

For that reason, the cost of a POC test is *not* measured against the cost of the same test performed in the core lab. It is measured as part of the entire clinical pathway, thus allowing the benefits of earlier detection or more rapid discharge decisions to be included in the cost-benefit analysis.

It should be no surprise that internal studies at PSG validate the conclusion that point-of-care testing frequently offers huge savings in the overall cost of patient care.

Fifth, HGL's experience demonstrates that the arrival of POC testing does not automatically result in increased utilization. As Dr. Jones observed, POC testing has actually brought the laboratory into closer communication with clinicians and added to their value-added role within the healthcare system.

Clients of THE DARK REPORT know our longstanding conviction that laboratory regionalization is the inevitable end game to healthcare's ongoing consolidation and integration. Regionalizing core laboratory services is a rational economic response to existing laboratory capacity.

In tandem with regionalization is the need for laboratories to participate in both clinical and operational integration of healthcare services. This will require laboratories to move an increasing number of tests outside of core laboratories and nearer to the patient. Consequently, there will be an increase both in the types of point-of-care testing assays available and the number of POC tests performed.

One factor not discussed by Dr. Jones is the ongoing arrival of smaller and more sophisticated POC instruments into the marketplace. Miniaturization of circuitry and the ability to perform a bioassay using smaller quantities of specimens and reagents will give each succeeding generation of POC devices improved clinical and economic benefits.

These are the reasons why THE DARK REPORT believes that the laboratory organization at PennState Geisinger Health System offers an early look at how laboratories within an integrated system will regionalize their services around a combination of centralized labs and point-of-care testing.

THE DARK REPORT further predicts that, during the next 24 months, point-of-care testing will carve out a new role for itself in the clinical continuum. Smart laboratories will put themselves in the forefront of this development. TDR

For further information, contact Jay Jones, Ph.D. at 570-271-6656.

MORE INFORMATION AVAILABLE

This briefing was prepared from interviews with Jay Jones, Ph.D. as well as his presentation at the* Executive War College *in New Orleans on May 11-12, 1999.

Dr. Jones's presentation provided a comprehensive overview of POC activities at PennState Geisinger Health System. An audio cassette and set of handouts can be ordered by calling Vicky Leslie at 503-699-0616. No charge to existing clients of THE DARK REPORT Intelligence Service. For non-clients the cost is $29.95 plus shipping and handling.

Lab Industry Briefs

ASSOCIATED PATH LABS WINS PATENT FOR DRUGS OF ABUSE TEST

IT'S NOT TOO OFTEN that independent commercial laboratories are awarded patents. Las Vegas-based **Associated Pathologists Laboratories** received a patent for a technique it developed relating to drugs of abuse testing.

The patent involves a unique method for detecting drugs of abuse in hair samples. APL has two additional patents pending relating to its proprietary method for using hair samples to test for drugs of abuse.

"Hair testing for drugs of abuse can detect drug use for the past 90 days, compared to traditional urine testing which can only detect drug use in the past 72 hours," said Craig Shanklin, Vice President, Marketing at APL. "Further, hair testing can detect up to twice as many drug users as urine testing."

DYNACARE IS AGAIN ON THE MOVE

SEEKING TO BUILD MARKET SHARE in the United State, **Dynacare, Inc.** has expanded into two new areas.

During June, Dynacare took title to **Medical Pathology Laboratory Ltd.** of Jackson, Mississippi. The laboratory operation does about $9 million per year in testing and offers services throughout the state.

Dynacare is building an extensive laboratory service infrastructure in Louisiana, Mississippi, Arkansas, and East Texas. These are markets which are relatively uncontested by the national laboratories and Dynacare is taking advantage of that fact.

In California, Dynacare has cracked a long-time partnership between a hospital system and a commercial laboratory. Effective July 1, 1999, it will become the turnkey laboratory services manager for the **Scripps Health System**. Scripps operates five hospitals in San Diego County.

Until July 1, Scripps had a partnership with **Pathology Medical Laboratories** (PML) of La Jolla, continually described by both participants in the past as a successful, long term relationship. Clients of THE DARK REPORT are familiar with this arrangement. It was one of the earliest commercial lab-hospital laboratory joint ventures established in the United States.

BIO-REFERENCE LABS WRITES DOWN ASSETS BOUGHT FROM SMITHKLINE

AT TIME OF PURCHASE, the dialysis testing business offered by **SmithKline Beecham Clinical Laboratories** (SBCL) looked attractive to **Bio-Reference Laboratories, Inc.** of Elmwood Park, New Jersey.

That was back in 1996. By December 1996, Bio-Reference was suing SBCL for misrepresentation, fraud, and breach of contract regarding SBCL's sale of its customer list and associated goodwill to Bio-Reference.

Now, three years later, Bio-Reference is writing down the remaining goodwill from the dialysis testing business, a charge of $1 million. It is also taking a reserve of about $2 million on accounts receivable, most of it attributable to dialysis testing activities.

For its second quarter, ending April 30, 1999, Bio-Reference is reporting

revenues of $13.4 million and a net loss for the quarter of $3.5 million. It's stock price is sagging below $1.00 per share, which may cause it to be delisted on Nasdaq's small cap market.

Of interest is the report by Bio-Reference that it saw a decrease in net revenue per patient (per accession) of 16% from the corresponding quarter last year. Revenue per patient declined from $50.96 to $42.93, even as the number of patients served increased by 6% over the same period.

Although Bio-Reference's revenue per patient is high for most commercial laboratories, the decline in average revenue per patient during the last fiscal year demonstrates that revenue erosion is still affecting clinical laboratories.

MORE DATA AVAILABLE ON CAPITATED LAB TESTING CONTRACTS

LABORATORY EXECUTIVES FOLLOWING the path of capitation as it transforms laboratory practices will find this information both useful and relevant.

Doug Pearl, of **Insight Consulting** in Brookline, Massachusetts, notes that during the 1997-1998 time period, **Quest Diagnostics Incorporated** filed public documents reporting that its *capitated* volume grew from 17% to 23% of total (accession) volume. Meanwhile, capitated revenues grew from only 6% to 8% of total revenues.

This indicates that the number of specimens covered by capitated agreements grew by 5%, yet revenues associated with those capitated specimens increased only 2% during the same period of time. Thus, it demonstrates that reimbursement for capitated testing remains at unsatisfactory levels for laboratories trying to recoup a fully-loaded cost per test.

As a point of comparison with Quest Diagnostics, in the May 17, 1999 issue of THE DARK REPORT, we provided some information from **Laboratory Corporation of America**. As of the year ending on December 31, 1998, LabCorp reported that "managed care represents between 35% and 45% of its accessions...and generated between $10 and $40 per requisition."

PATHOLOGY PPM SCENE EXTRA QUIET DURING RECENT MONTHS

IT SEEMS LIKE A NUCLEAR BOMB went off inside the physician practice management industry. In the aftermath, things became extraordinarily quiet.

Pathology-based PPM (physician practice management) companies are deliberately keeping a low profile since the spectacular failure of the industry's multibillion dollar tyrannosaurus rex, **MedPartners, Inc.** during 1998.

Not only are pathology PPMs choosing to stay out of the public limelight, they are also busy reinventing themselves. New business strategies are emerging as these companies evaluate changes to the pathology marketplace. Some of these will be reported in coming months.

Best-known of the pathology PPMs is **AmeriPath, Inc.** of Rivera Beach, Florida. As of the end of first quarter 1999, its annual revenue run rate had climbed to $208 million. During the second quarter, it has been quietly working to implement its business plan, which includes a strategy of growth through acquisition.

Other than the acquisition of a $3.5 million pathology practice in Hialeah, Florida in May, AmeriPath has yet to disclose additional acquisitions for the quarter. With the end of the second quarter approaching, it would be reasonable to expect AmeriPath to make announcements this week of additional pathology practice acquisitions. TDR

INTELLIGENCE

LATE & LATENT
Items too late to print, too early to report

South America continues to catch the eye of many North American health insurers. **Aetna International, Inc.**, the international operating subsidiary for **Aetna Inc.**, disclosed its purchase of a 50% interest in **Cruz Blanca Columbia**. This is a clinic-based healthcare insurance organization with 190,000 members in Columbia. Aetna's acquisition was done through its Chilean subsidiary. "We now serve customers in every large-scale Latin American market," boasted Frederick C. Copeland, Jr., President and CEO of Aetna, International.

ADD TO...OVERSEAS HEALTHCARE INVESTING

THE DARK REPORT sees increasing activity by a number of leading American healthcare firms, including hospitals, to establish operations in a variety of countries around the world. However, clinical laboratories offering routine testing are not among them. An international specialist for one of the nation's leading reference and esoteric laboratories recently told THE DARK REPORT that "most overseas countries have the same problems with laboratory overcapacity and inadequate reimbursement as the United States." For that reason, he says that international expansion for clinical laboratories offering routine testing is not likely to occur in the near future.

LAB VENDORS RECOGNIZED FOR OUTSTANDING SALES FORCES

Recently **H.R. Chally Group**, an Ohio-based firm specializing in sales force strategies, polled 7,300 companies as to their evaluation of sales forces. In the industry segment for medical devices, two diagnostics companies made it into the Top 12. **Johnson & Johnson** and **Baxter International, Inc.** ranked number nine and ten on the list, respectively. According to Chally, "the overall competence of the sales rep was the most important factor in determining a customer's satisfaction with a product company." **Hillenbrand Industries** and **Zimmer Inc.** were numbers one and two in Chally's sales force ranking.

THE DARK REPORT will go out on a limb with some predictions on the upcoming merger between **Quest Diagnostics Incorporated** and **SmithKline Beecham Clinical Laboratories** (SBCL).

PREDICTION ONE: After the merger, it will be announced that the Corporate Medical Director will be SBCL's Edward A. Kaufman, M.D., who has always been a leader within the SBCL organization. He fits the pro-active, involved management style Quest wants to develop.

PREDICTION TWO: No major role post-merger for John B. Okkerse, Jr., Ph.D., SBCL's current President. Our reasoning? Despite his reputation as a tough competitor, during the last two years he was involved in SBCL's decision to sustain marginal cost bidding for incremental work wherever it might weaken Quest Diagnostics and **Laboratory Corporation of America**. Financial pain caused by that particular pricing strategy is probably not quickly forgotten by SBCL's new owners.

That's all the insider intelligence for this report. Look for the next briefing on Monday, July 19, 1999.

THE DARK REPORT

UPCOMING...

- *Anatomic Pathology Meets the Internet: Money-making Opportunities to Consider.*
- *Exclusive Behind-the-Scenes Look at How Winning Labs are Coping with Capitation.*
- *First Look at How the SBCL Acquisition is Changing Quest Diagnostics Incorporated.*
- *Headhunters Give Lab Executives the Straight Scoop on Their Career Prospects.*