Volume VI, Number 12 Monday, August 30, 1999

From the Desk of R. Lewis Dark...

THE DARK REPORT

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

Restricted information, see page 2

Commentary & Opinion by...

R. Lewis Dark

Founder & Publisher

Don't Take Your Eyes Off the Ball!

HOW MANY OF US HAD A FATHER WHO TAUGHT US THE BASICS OF BASEBALL almost as soon as we learned to walk? I can still remember my father repeatedly advising me "don't take your eyes off the ball!"

With the recent merger of **Quest Diagnostics Incorporated** and **SmithKline Beecham Clinical Laboratories** (SBCL), the warning "don't take your eyes off the ball" should be a strategic guide to every executive in the laboratory industry today. For managers within the "new" Quest Diagnostics, it is important for them to remember that the ball they want to swing at is service to existing clients. If they get distracted by internal consolidation projects, clients will suffer and competitors will have a field day.

Hospital laboratory directors will also want to swing at the ball of customer service. If the merged combination of Quest/SBCL drops that ball, there may be a motivation by hospital labs to switch to other reference laboratory sources. In fact, that is the theme of our lead story on pages 2-7.

Managers of regional laboratories and hospital lab outreach programs should swing at the ball known as new business. The next twelve months will provide excellent opportunities to use the market turmoil caused by the Quest/SBCL merger to capture new clients. But, to take advantage of this one-time opportunity, these managers must act with boldness and confidence. Now is the time to intensify sales activities and ask for the business.

I would like to point out that the apparent loss, by Quest Diagnostics, of **Kaiser Permanente's** national reference testing account (as yet publicly unannounced–see page 8), is the first evidence that distractions caused by its acquisition of SBCL have made at least some Quest clients vulnerable to competing laboratories. Regardless of price and terms offered to Kaiser by the winning laboratory, it was a highly-visible client which Quest could ill afford to lose at this particular moment.

After all, Quest has repeatedly told Wall Street financiers and the investing public that it can successfully acquire SBCL and hang on to the business. Loss of the national Kaiser contract within the first 30 days of the SBCL acquisition certainly contradicts that claim. That's why my advice to everyone in the lab industry is the same as that heard from our dads so many years ago—don't take your eyes off the ball! After all, there's a lot of money to be made by those who stay focused on the exceptional sales opportunities now unfolding in the laboratory and pathology marketplace. TDR

Reference Labs Intensify Battle for Send-Out Tests

More competition for reference and esoteric testing will benefit hospital laboratories

CEO SUMMARY: Expect a battle royale for hospital reference and esoteric testing by the handful of labs that offer such testing to hospitals throughout the country. With the merger of Quest Diagnostics Incorporated and SmithKline Beecham Clinical Laboratories now a fact, competitors are already swarming into hospital labs with offers of better service and improved prices for send-out work.

COMPETITION FOR SEND-OUT testing is heating up as at least six different lab companies intensify their efforts to capture new business. This increased competition is good for hospital laboratory administrators.

During 1999, two events directly intensified the competition for hospital laboratory send-out testing. One is the acquisition of **SmithKline Beecham Clinical Laboratories** (SBCL) by **Quest Diagnostics Incorporated** on August 16, 1999. The other is the stated goal of **American Medical Laboratories, Inc.** (AML) to become a national reference laboratory provider.

Each of these two events is triggering a different cascade of consequences. In the case of the merger of Quest and SBCL, many hospital lab clients of both companies are concerned about the negative impact the merger may have on their particular laboratory operation.

Combined, the Quest/SBCL combination has about 45% of the hospital send-out market in the United States. Thus, any operational problems at the "new" Quest Diagnostics have the potential to impact a disproportionately large number of hospital laboratories throughout the country.

Second, there are a number of hospital laboratory administrators and medical directors who've had a clear preference for either Quest or SBCL. They are not pleased to find themselves dealing with the "other" lab company as a result of the merger.

It is too early to determine whether Quest Diagnostics will see a

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THE DARK REPORT Intelligence Briefings for Laboratory CEOs, COOs, CFOs, and Pathologists are sent 17 times per year by The Dark Group, Inc., 1731 Woodland Terrace Center, Lake Oswego, Oregon 97034, Voice 1.800.560.6363, Fax 503.699.0969. **(ISSN 1097-2919.)**

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SUBSCRIPTION TO THE DARK REPORT INTELLIGENCE SERVICE, which includes THE DARK REPORT plus timely briefings and private teleconferences, is $10.80 per week in the US, $11.40 per week in Canada, $12.45 per week elsewhere (billed semi-annually).

significant turnover among its hospital laboratory clients as a result of the acquisition. However, since news of the Quest/SBCL merger became public last February, competing reference labs tell THE DARK REPORT that their phone lines have sizzled with calls from Quest and SBCL clients interested in exploring the benefits of changing their reference laboratory arrangements.

QUESTION: What types of reference or esoteric testing will see the fastest growth in coming years?

Everyone wants to look into the crystal ball and predict which areas of laboratory testing will be fastest-growing. Who better to answer this question than Laboratory Corporation of America, which played an early role in championing PCR testing?

"At LabCorp, we divide esoteric testing into the areas of 'basic', such as tumor markers, and 'high-end', such as genetics, molecular diagnostics and resistance testing," said Pamela Sherry, Vice President for Investor Relations at LabCorp.

"Basic esoteric testing is growing by 1% to 7% per year," she observed. "Our high-end esoteric testing is growing much more rapidly. Depending on the specific tests, year-to-year changes in volume can range from 8% to 30% on a sustained basis."

The second development in 1999 which intensifies competition for hospital laboratory send-out work is the desire of American Medical Laboratories to transform itself from a routine and regional hospital reference testing provider into a company with national ambitions. *(See TDR, April 5, 1999.)*

AML expanded its sales force in both 1998 and 1999. There are now sales representatives making calls on hospital laboratories in all areas of the United States.

The effect of this development will be to "raise the bar" on the minimum acceptable package of lab tests and support services offered to hospital labs by national reference laboratories. This identical phenomenon has already happened twice to the lab industry.

The first time was when **ARUP Laboratories** entered the national arena in the late 1980s. The second time was in the 1990s when **Specialty Laboratories** blossomed beyond its traditional esoteric test menu into a full-service provider of reference and esoteric testing.

In each case, the newcomer had to offer a better value proposition than its existing competitors if it was to acquire new business. As a result, competing labs were forced to upgrade their value packages if they were to retain their existing client accounts.

Basket of Services

As a result, hospital laboratories enjoyed a greater basket of services, offered at virtually the same test pricing as before the new competitors entered the marketplace.

THE DARK REPORT predicts that the same thing is about to happen during the next 24 months. The arrival of AML on the national scene, combined with any "discomfort" resulting from the Quest/SBCL merger, will cause all reference laboratories to richen the total mix of lab testing prices and support services they offer clients. This process is already under way, but will take another year to become recognizable.

Moreover, this developing trend means that group purchasing organizations (GPO) will lose relevance as part of this process, although this consequence will not be obvious for some time. The reason is simple.

Hospital GPOs are organized primarily to bundle purchasing volume from their members and negotiate a very low price based on that large volume. This purchasing strategy works

Reference & Esoteric Lab Testing: Who's Got The Business?

Here's a first-ever ranking of those laboratories which offer a full menu of reference and esoteric testing to hospitals throughout the United States. Numbers were assembled from a combination of public documents, information from private sources, and THE DARK REPORT's travels around the country.

NATIONAL ESOTERIC/REFERENCE LABS

Hospital Send-Out Testing
Ranked By Estimated Annual Revenue
($'s in millions)

Rank	Laboratory		Estimated 1999 Revenue
1.	SmithKline Beecham Clinical Labs[1]	*Collegeville, PA*	$300
2.	Specialty Laboratories, Inc.	*Santa Monica, CA*	$210
3.	Quest Diagnostics Incorporated	*Teterboro, NJ*	$189
4.	Laboratory Corporation of America[2]	*Burlington, NC*	$165
5.	ARUP Laboratories, Inc.	*Salt Lake City, UT*	$102
6.	Mayo Medical Laboratories, Inc.[3]	*Rochester, MN*	$95
7.	American Medical Laboratories, Inc.[4]	*Chantilly, VA*	$72
Total For Seven National Reference/Esoteric Laboratories			***$1,133***

Notes:
1) *SmithKline Beecham Clinical Laboratories listed separately to show historical share of the market prior to its merger with Quest Diagnostics Incorporated on 8/16/99.*
2) *Laboratory Corporation of America provided a number of $300 million for what it defines as "basic esoteric" and "high esoteric" testing. This number includes testing referred directly from physicians offices, as well as hospital send-out tests. TDR estimates $165 million of this number originates from hospitals.*
3) *Revenue for Mayo Medical Laboratories includes captive business from Mayo facilities in Rochester, MN; Scottsdale, AZ; and Palm Beach, FL*
4) *American Medical Laboratories has traditionally served East Coast clients. Since 1997, it has expanded its service area to include the entire United States. This number is for hospital send-out testing only and does not include its revenues from physician offices.*

This ranking shows the current position of the leading national reference laboratory providers. Expect these numbers to change from year to year as competition for hospital send-out testing becomes more intense. This ranking does not include niche or specialty laboratory companies which provide specific lines of testing to hospital laboratories. Each of these companies was provided with these numbers in advance. Each company had the opportunity to make corrections and provide additional input as appropriate.

best when the product being purchased is like a commodity, such as immunology assays or electrophoresis tests.

QUESTION: Will price or service be more important in selecting a reference/esoteric lab?

Free market principles are working to improve the value of reference and esoteric testing services available to hospital laboratory administrators. But will price be the crucial element of the RFP?

"During my many years in the business, hospitals have traditionally looked at price as the most compelling element when deciding upon a reference laboratory," observed Jack Bergstrom, Executive Vice President at American Medical Laboratories in Chantilly, Virginia.

"That has changed in 1999. We've begun to see a clear swing towards an RFP weighted between low prices for testing, combined with services such as information linkages or operational help, including support for the hospital lab's outreach program," noted Bergstrom.

"It's my bet that reference labs will not rely on a strategy of offering rock-bottom prices and not much else. Rather, cost pressures on reference labs will encourage them to bundle testing and relevant services for that client into a single contract package, priced so that the client gets additional value from non-testing services," he concluded.

But THE DARK REPORT believes this approaching wave of reference laboratory competition will not emphasize volume-based discounted pricing. Rather, reference labs will build additional support services into their basic test price matrix.

For example, hospital labs which want more sophisticated information system linkages will get those services in their reference lab RFP. In contrast, hospitals seeking help in building their outreach program will get those particular services bid into their particular RFP.

This means that reference laboratories will offer their hospital clients a customized basket of testing, prices, and services. It's actually an individually tailored package of support services which are of particular value to one specific hospital client, but not to other hospitals.

The organizational structure of a GPO makes it very difficult for the GPO to negotiate a customized package of reference lab testing services for individual member hospitals. For this reason, THE DARK REPORT believes that most GPOs will lose some of their ability to drive down lab test prices, because price alone will cease to be the main value proposition used by its hospital members when choosing a reference laboratory.

Difficulty For Premier, Inc.

Clients and readers of THE DARK REPORT will recognize that this scenario creates the most difficulty for **Premier, Inc.**, which is ardently striving to enforce high compliance with its national reference laboratory contracts.

As the value equation of individual hospital lab-reference labs shifts away from lowest price and toward customized service packages, Premier's national contracts, based primarily upon a low price, will be less competitive than the individual "service packages" negotiated independently by its member hospital labs. Premier will have to find a new method of bringing value to its member hospital laboratories.

Another important consequence of this new cycle of intensified competition will be increased customer expectations. Simply stated, hospital lab administrators will expect their reference laboratory to offer more value than in past years.

Are customer expectations changing among hospital laboratory administrators? THE DARK REPORT believes

there is evidence that expectations are already moving higher.

For example, during most of the 1990s, hospital laboratories requested timely, cost-effective CPU-CPU information links between their computers and those of their reference laboratory provider. Despite the importance of these links to customers, reference laboratories generally did a poor job of delivering such links.

Up to now, such links generally took thousands of dollars to program, required significant input from both the reference lab and the hospital's IS team to implement, and required months, if not years, to accomplish. As a result, many hospital lab customers accepted the fact that CPU-CPU links were more of a wish than a reality.

This interconnectivity issue has never been satisfactorily solved. Low expectations by hospital lab administrators about a reference lab's performance on this point perpetuated the status quo.

For example, **Mayo Medical Laboratories**, beginning in 1995, made it their major marketing strategy to sell regional laboratory networks. Among the items Mayo promised to deliver to the network in its RFP sales package was its proposed "MayoNet" information system. MayoNet was to provide single-entry data interconnections between the Mayo lab and all hospital labs participating in the network.

Almost five years later, the Mayo-sponsored regional lab networks are still waiting for a single-entry information system link. Of course, just about every other non-Mayo regional network lacks a single entry network as well. Information links between labs is a problem which has eluded a solution.

But that is about to change. THE DARK REPORT predicts that speedy and cost-effective CPU-CPU links between lab and client will soon become an industry standard for any national reference laboratory.

This will happen as soon as one reference laboratory figures out a way to connect its computer to a hospital's with a minimum of fuss and expense. Every one of the six national reference labs is racing to develop this solution, get the kinks worked out, and put it into their clients' laboratories.

QUESTION: How Important Will Test Pricing Be In Selling Reference/Esoteric Tests?

Many businessmen have heard the saying that "the lowest price is not always the cheapest price."

"For years, both clinical laboratories and reference laboratories have fought this battle," observed Dennis Monahan, Vice President at ARUP Laboratories. "Most of us have observed situations where price discounting led to a decline in the quality of testing and support services offered by that laboratory. We've seen struggling labs attempt to retain clients by offering rock-bottom prices.

"That is why I believe that test prices for reference and esoteric send-out work will continue to be a major factor for hospital laboratories, at least in the near future," he noted. "For example, it is reasonable to expect that intense competition for hospital send-out testing will cause some reference labs to do everything necessary to defend their existing reference business from competing labs. In those instances, a reference lab may decide that it is smart business to use low prices to retain its clients. Across the country, this may keep reference testing prices low for some number of months.

"However, there is a growing interest among many hospital laboratories to have their reference lab help them develop direct interfaces and links with their physician offices," stated Monahan. "Wherever these factors are important to the client, price will be less of a determining factor in their selection of a reference lab."

It is only a matter of time before the first "perfect" interconnection software is perfected and put into use. Once this occurs, competing reference labs must match that accomplishment or lose hospital lab business.

QUESTION: What Do Hospital Labs Really Want When Selecting Their Reference Lab?

"In today's environment, we see an increasing number of hospital labs demanding a different mix of services from their reference laboratory," said Paul F. Byer, President of Specialty Laboratories, Inc. of Santa Monica, California.

"First, they want information connectivity on three levels," he noted. "They want a direct interface with their reference lab. They want to link all their enterprise labs with the core lab. And, they want to link with the physicians offices and other provider sites within their system.

"Second, I see outreach programs becoming more important," continued Byer. "Although hospitals have been reluctant to push lab outreach programs, the need to drive revenue is motivating them to enter the outreach market.

"Three, hospital core labs are on the verge of another organizational evolution," observed Byer. "New assays, new instrument technologies, and the integration of the hospital with outpatient providers will require reference labs to support this coming generation of hospital labs in different ways."

This is an example of how lab customers' expectations are changing. Once they can get a low-cost, effective information system link from one reference lab, they will expect it as the "standard of service" from all reference labs.

With the marketplace for send-out testing about to enter a new cycle of intense competition, hospital laboratory administrators will find themselves with some excellent opportunities to negotiate an enhanced package of reference testing prices and support services.

THE DARK REPORT recommends that hospital labs seeking to revisit their reference and esoteric arrangements should do four things.

First, contact a number of reference laboratories and informally discuss what type of services they are willing to provide if you were to become a client. Compile a comprehensive list of the types of services which are offered.

Second, working from this list, go back to all the reference labs contacted initially. Ask them to show you ways they could help you reduce costs in your lab, improve quality and turnaround time, and add worthwhile services to your laboratory operation. The objective here is, in an open-minded fashion, to have these reference labs identify for you opportunities within your lab to generate efficiencies and enhanced laboratory services.

Compile a "Wish List"

Three, from these two steps, compile a "wish list" of what you would like from your reference laboratory. Then approach your existing reference laboratory and give them an opportunity to respond to these items.

Four, depending on the response from your existing reference lab, determine whether you wish to create a request for proposal (RFP) and entertain serious proposals from other vendors for your reference testing business.

During the next 24 months, there will be outstanding opportunities to shop these six reference/esoteric testing providers and negotiate a winning package. Like the television game show, it's a good time to declare "let's make a deal." TDR

For further information, contact Pamela Sherry at 336-584-5171; Jack Bergstrom at 800-336-3718; Dennis Monahan at 801-584-5172; Paul Byer at 310-828-6543.

Kaiser's National Lab Business Awarded to American Med Labs

Quest Diagnostics loses major reference contract to upstart laboratory company from Virginia

MANY EXECUTIVES in the laboratory industry will be surprised to learn that **American Medical Laboratories, Inc.** (AML) of Chantilly, Virginia has aced out **Quest Diagnostics Incorporated** to become the primary reference laboratory for all divisions of **Kaiser Permanente** across the United States.

As of press time, there was no public announcement about the contract award. THE DARK REPORT estimates that Kaiser's national reference account probably generates around $20 million per year in send-out testing, but no one at AML or Kaiser would confirm that number. It's believed that the contract term is for at least five years.

American Medical Laboratories' success in capturing Kaiser's national business certainly boosts its credibility as the Virginia-based company pushes to become a national reference laboratory. This contract award also subjects AML to closer scrutiny. There are many naysayers in the lab industry who believe that AML is not up to the task of serving the far-flung Kaiser organization and they will be watching for any signs of problems.

Testing Was Divided

Prior to this contract, Kaiser's business was divided. West coast divisions used Quest Diagnostics. This was a legacy account from the former **Nichols Institute**. Kaiser's east coast divisions used AML.

Kaiser launched an RFP process with the goal of combining all its send-out testing into a single national contract. Observers believed that Quest Diagnostics had the inside track, for very good reasons.

At Kaiser's annual awards ceremony this winter, Quest Diagnostics won recognition as the second best vendor within Kaiser's national system. Also, seven of the eleven votes on the reference laboratory selection committee were individuals working in labs directly serviced by Quest Diagnostics.

Overcame Long Odds

Given the satisfaction and respect Quest Diagnostics had earned with the Kaiser organization, AML certainly overcame long odds in its successful effort to win Kaiser's national reference testing contract.

As stunning as this development is to long-time observers of the laboratory industry, it is also a warning to competing laboratories that AML intends to wrestle itself a place at the table.

In recent years, both **Specialty Laboratories, Inc.** and **ARUP Laboratories, Inc.** have enjoyed sustained revenue growth, solid profits, and a good reputation with hospital laboratories. Now, another aggressive, noisy competitor is serving notice that it intends to crash the party.

For hospital lab administrators, these developments should be welcome news. As noted elsewhere in THE DARK REPORT, a credible new competitor in the national market will only serve to raise service levels offered by reference labs to their hospital clients while keeping a lid on immediate price increases. TDR

Telepathology Underpins Telehealth Outcomes

Clin Lab & Pathology Informatics Merging For Internet Solutions

CEO SUMMARY: Information is where both clinical laboratories and anatomic pathologists will continue to add value to healthcare in the future. At this year's Executive War College in May, THE DARK REPORT asked several leading innovators in laboratory and pathology informatics to share their actual experience in funding and operating the earliest telemedicine and telepathology systems. Here is a revealing look at how Michael J. Becich, M.D. and his colleagues at the University of Pittsburgh Medical Center are evaluating and using laboratory informatics.

PART ONE OF A THREE-PART SERIES

TELEPATHOLOGY TODAY IS A FAILURE! That is the firm conviction of Michael J. Becich, M.D., Ph.D., Director of the Division of Pathology Informatics at the **University of Pittsburgh** School of Medicine.

"I call telepathology a failure for one reason," said Dr. Becich. "In almost every case where some form of tele-'X' medicine has been tried, it has not succeeded. That is because the regulatory, legal, and reimbursement procedures needed to support telemedicine, and telepathology, remain undeveloped. That may continue to be true for some time."

Dr. Becich made these remarks at the *Executive War College* in New Orleans last May. Although disparaging about telemedicine as it exists today, Dr. Becich is firmly convinced that a seamless blending of clinical laboratory and anatomic pathology information is the success ticket for the future.

"I believe that informatics technology is building a new framework around the clinical disciplines we now call clinical laboratory and anatomic pathology," he predicted. "At the **University of Pittsburgh Medical Center** (UPMC), we've developed a strategy we call 'telehealth.' We're taking the infrastructure of today's telepathology technology and turning it into added value services that attract clients and clinical consults to our enterprise."

Unlike many academics, Dr. Becich has a keen sense for the healthcare marketplace and how pathologists must "sell" themselves to prosper within that marketplace. One of his goals is to develop UPMC's pathology services into a national and international brand.

"We already see evidence that our high-tech informatics and telehealth capabilities give us a leg up on our competitors and bring new business into our pathology practice."

Dr. Becich feels it is essential to understand two fundamentals about laboratory and pathology informatics. "The first fundamental is why telepathology and telemedicine has yet to succeed," he noted.

"The second fundamental involves understanding why there is both a *need* and an *opportunity* for pathologists to incorporate tele-services and sophisticated informatics into their medical practice," continued Dr. Becich.

Fundamental number one is actually an obstacle which needs to be overcome. For Dr. Becich, the collective failure of telemedicine through 1999 can be attributed to two main factors. "One is cost of the systems themselves," he said. "The other is the lack of reimbursement.

"To date, there have probably been 60,000 telemedicine consultations. Yet virtually none of these consultations flow through the usual channels of reimbursement, such as government and private payers," stated Dr. Becich. "I don't know how any provider can support a telemedicine program without reimbursement."

Steady Growth In Testing

"Of course, there are some notable exceptions," he added. "The **Veterans Administration** is a sterling example of appropriate use of telepathology. They are leaders in its application.

"But overall, today's brand of telemedicine does not deliver services in a way that compliments the mainstream practice of medicine," said Dr. Becich. "That holds it back, but that situation is changing rapidly.

"Also, I would observe that the terms telemedicine and telepathology have negative connotations with many people," Dr. Becich stated. "Telemedicine evokes images of an empty room some place full of data, without the human touch. There is also a fear that somehow telemedicine will displace local physicians who do the real work every day in every city and town around the country.

"I like to avoid the negative images that accompany terms like telemedicine and telepathology," offered Dr. Becich. "We prefer to use the term telehealth within our organization, for reasons I will explain in a minute.

"Besides the lack of reimbursement, growth of telepathology has suffered because of the high cost of the technology," he said. "The most successful of the telepathology systems in use today cost upwards of $250,000 per device to install.

"Few pathology practices can use such systems to generate the substantial revenues needed to get a return on an investment that big," pointed out Dr. Becich. "Recent price drops allow an adequate system to be installed for as little as $150,000. But that is still a substantial investment to put a robotic, dynamic microscopy system into a remote site."

Failure Of Telemedicine

Taken collectively, Dr. Becich's comments indicate that telemedicine and telepathology has so far been a failure because of: 1) the high cost to install and operate systems using existing technology; 2) the lack of reimbursement by payers and government health programs for clinical services rendered through telemedicine systems; and, 3) the lack of legal and professional guidelines supporting effective medical services performed through telemedicine or telepathology capabilities.

THE DARK REPORT would add one more element to Dr. Becich's evaluation of telemedicine and telepathology's failure. That is the fear of local physicians that "out-of-state" doctors will use telemedicine to invade their turf and steal market share. That is one reason behind the jumble of state laws which govern licensure and how medical services can be offered within the state.

Dr. Becich's second fundamental involving laboratory and pathology informatics deals with the medical community's need for improved pathology services. "Telepathology has the potential to solve a lot of medical and operational problems."

Within The UPMC System

"For example, take my needs as a working pathologist in the UPMC health system," he noted. "Within a 1.5 mile radius of my hospital, I have three major hospitals, a cancer care center, an orthopedics center, as well as the UPMC acute care, trauma, and transplant services sites.

"If I need to look at a prostate biopsy, it may take me 20-25 minutes to get over there," said Dr. Becich. "Or, someone must spend the same amount of time to get the slide to me. So, one function of our imaging system is for informal consults. Certainly these are not billable forms of revenue, but the time and courier savings are considerable.

"If the images are not up to the quality I need, the slide can certainly be packed and shipped to me," he explained. "But currently about 85% to 90% of these cases are handled using our imaging system. Within our group practice, this has been a valuable solution."

Imaging System

"UPMC's relationship with **Quest Diagnostics Incorporated** generates cases in anatomic pathology, dermatopathology and related areas. We expect our imaging system to figure prominently in how we service this relationship," noted Dr. Becich.

"It doesn't stop there, however. The UPMC health system now numbers 18 purchased or merged hospitals and 138 affiliated medical practices. On June 1, UPMC's hospital in Palermo, Italy become operational. Our imaging system is utilized in all of these environments," said Dr. Becich.

Creating Telehealth Solutions From Telepathology

Dr. Michael Becich's strategies for pathology-based telehealth services:

- *Pathology is a visual discipline so implement digital imaging.*
- *Integrate imaging with laboratory information systems (LIS) and billing/ordering functions.*
- *Integrate imagining/LIS with the world wide web and develop an Internet strategy.*
- *Develop methods of publishing pathology reports on the Internet.*
- *Develop a strategy to receive and send images from outside centers and other specialists.*
- *Integrate multimedia pathology reports with electronic medical records (EMR) systems.*

"Thus, when dealing with clinicians from inside our extended healthcare enterprise, telepathology and the electronic movement of images and diagnoses makes good economic sense, even before considering outside reimbursement," he observed.

Coupled To LIS

"I should add that it is necessary to have this system coupled to your LIS," he said. "We have the luxury of an integrated imaging system which sits atop our LIS. Because we are a teaching, research, and clinical center, there is an absolute hunger and thirst for pathology images from the multiple professional schools, nursing, pharmacy, dentistry, and the center for biomedical informatics.

"This was the justification for our original investment in telepathology capabilities," said Dr. Becich. "It was a significant step for us. We now provide informatics and images that support an average of 60 clinical conferences per week!"

As Dr. Becich illustrates, one function of telepathology is to improve the organizational efficiency of pathologists within an integrated healthcare enterprise. But the real need for telepathology is in offering more sophisticated information and value to clinicians.

Here is where pathologists can fill a need and seize an opportunity at the same time. In so doing, pathologists elevate their contribution and importance to the healthcare community.

"In recent years, the growth in specialty laboratories has been phenomenal," stated Dr. Becich. "The complexity of clinical pathology and anatomic pathology increases yearly."

Patient Access To Records

"Yet, among clinicians, medicine is migrating to the primary care physician (PCP)," he observed. "Even more interesting, a greater number of patients are insisting on increased access to their clinical records so they can make more informed decisions about their course of treatment.

"Thus, even as pathology reporting becomes more complex, the recipient of the pathology report may not be as sophisticated as the medical specialist who traditionally referred cases to the pathologist," Dr. Becich stated.

"Consequently, there's a need for more sophisticated pathology information, but presented in a simple, easy to understand format," he said. "Pathology informatics is the key to filling this need and seizing this opportunity."

Telehealth Is Preferred Term

"That is why I prefer to use the word 'telehealth' over telepathology," explained Dr. Becich. "Pathology reports must be tailored to the end user. These reports need to provide appropriate information which improves outcomes and benefits the patient.

"Right now, because of effective marketing of specialized pathology services, 30% of my caseload is referred by pathologists," he said. "Is it right to send the same report to pathologists, and specialists, and primary care doctors? And what about patients who want to see their reports?

"It is my conviction that one of the biggest growth areas in healthcare will be in sharing information with patients," predicted Dr. Becich. "This creates a new challenge, which is to design a pathology report that patients find useful."

Enhance Clinical Value

Dr. Becich is describing the end process of healthcare integration. Interacting with the pathologist will be primary care physicians, certain specialists, and the patients themselves. To provide the necessary value, pathologists must develop ways of sharing information that enhance clinical practices.

"Take the primary care doc, for example," stated Dr. Becich. "As lab testing becomes more complex, how does he deal with the diarrhea of paper coming out of our labs? If a patient has advanced liver disease, how does the doctor deal with 15 different paper reports and no graphical output?

"This is why pathologists have the opportunity to provide telehealth services," he continued. "It is how we package and present the information we've developed that will make it easier for doctors to comprehend and apply that data for the benefit of their patients."

Against the background of these two fundamentals, it becomes easier to understand why UPMC's pathologists decided to acquire and adapt telepathology and informatics capability to today's healthcare needs

"Probably the first major insight we developed was agreement that pathology was a visual discipline," noted Dr. Becich. "Whether it is gels, quantitative feedback from an instrument, anatomic or cytology slides, or even the autopsy itself, pathology services center around images."

Convert To Digital Images

"So, the first step in our effort was to develop a way to convert this range of visual information into some type of digital images," he said. "When we started our first imaging initiative at the University of Pittsburgh, I counted 54 different types of film in my department. Less than one-third of them could fit in the same size of jacket and be held together in any useful fashion.

"If you think about it, film is a nineteenth century solution," stated Dr. Becich. "Once we went digital with all these images, it became easier to share the information within our system. It also allowed us to combine clinical data in new ways."

It is this digital imaging capability which underpins the telehealth strategy of the UPMC pathologists. In upcoming installments of this story, THE DARK REPORT will explore how Dr. Becich and his colleagues are moving both anatomic and clinical pathology to a higher level of relevance and involvement in clinical activities.

It should be understood that the practice environment within the UPMC system is unique. This institu-

INTEGRATED REPORTING (INFORMATION THERAPY)

A "smart pathology" report might include:

- *History of previous pathology reports and links to those reports.*
- *AP, CP, Molecular Diagnostics encounter report.*
- *Images, graphical output of CP data.*
- *Value-added contributions, such as prognostic information, data mining, www links, subjective "expert" opinion, clinical pathology information, E-mail contact hyperlink.*
- *Report should be tailored to unique needs of a primary care physician, an oncologist (specialist), and a patient.*

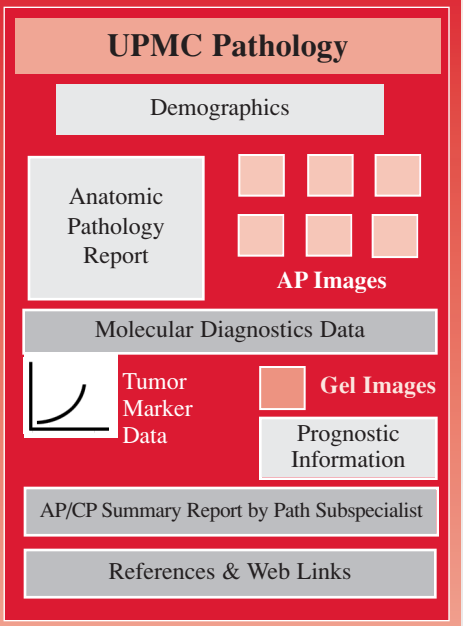
For more on Dr. Michael Becich's pathology informatics, check out:

http://path.upmc.edu/

http://www.pathology.pitt.edu/apiii98

(The APIII99 meeting is scheduled for October 14-16, 1999)

Here is the type of integrated pathology report now in use at UPMC.



This pathology report format now in use by UPMC pathologists attempts to help the clinician by presenting, in a unified and comprehensive way, the relevant findings from a range of pathology services provided to a particular patient. One interesting aspect is the section at the bottom with references and relevant Internet hyperlinks.

tion's research and teaching missions allowed Dr. Becich to acquire technology which is generally out of reach for the typical community hospital-based pathologist.

At the same time, Dr. Becich and his colleagues were willing to push the boundaries of this technology. Their vision is that pathology becomes a necessary part of improving outcomes while lowering the cost of care.

It is these activities which bear watching by pathologists and lab executives throughout the country. Pathologists at UPMC will experience both successes and setbacks in their efforts to move the pathology profession into the 21st century. But this kind of pioneering work must be done if pathology is to increase its relevance in the integrated healthcare community of the future. TDR

For further information, contact Michael J. Becich, M.D., Ph.D., at 412-647-6600 or email to BecichMJ@msx.pumc.edu.

The Dark Index

Bankruptcy at Universal Standard Brings End to Detroit Laboratory

Company tried to blend clinical lab tests with managed care management services

ANOTHER OF THE EARLY 1990'S wunderkind laboratory companies is now defunct. On August 13, **Universal Standard Healthcare, Inc.** (UHCI) filed a Chapter 7 Bankruptcy action in federal court and ceased business operations.

Headquartered in Southfield, Michigan, Universal Standard was one of a handful of clinical laboratories that went public in the early 1990s. It used acquisitions to rapidly increase revenues.

What made Universal Standard unique in the lab industry was its effort to build a TPA (third party administrator) business to serve insurance companies and managed care plans. As a TPA, the company offered clinical laboratory testing, outpatient diagnostic imaging, and home medical devices. This TPA business was worth about $18 million per year and was primarily from contracts with the three Detroit auto manufacturers and unions representing auto workers.

Forced To Sell Lab Business

In recent years, Universal Standard struggled to maintain financial solvency. Just last year it was forced to sell its clinical laboratory testing business (with revenues of approximately $37 million per year) to **Laboratory Corporation of America.** (*See TDR, July 27, 1999.*) This was a strategic decision to stop performing laboratory testing and emphasize its TPA activities.

However, the sale of its laboratory testing business only brought temporary relief. In October 1998, its contract with **General Motors Corporation** was terminated. Company officers state this contract was a money-loser and represented about 28% of the company's revenues from TPA activities.

Ended With Bankruptcy

During 1999, Universal Standard fought to hold its TPA business together. The continuous struggle ended with the company's Chapter 7 bankruptcy filing on August 13, 1999.

Chairman, President, and CEO of UHCI was Eugene E. Jennings, who was not originally from the clinical laboratory industry. But many in the lab industry are unaware of two respected lab executives who served on Universal Standard's Board of Directors.

Robert P. DeCrease, M.D. had served as a UHCI director since 1992. He is currently Director of Clinical Laboratories for **Rush-Presbyterian/St. Luke's Medical Center** in Chicago. P. Thomas Hirsch, President and CEO of **Path Lab, Inc.** in New Hampshire, had served as a UHCI director since 1994.

With its demise, Universal Standard Healthcare joins a growing list of lab industry leaders from the early 1990s who did not survive the arrival of managed healthcare. TDR

KC Regional Lab Network Makes Steady Progress

Nine-laboratory network in Kansas City now has a full-time executive director

CEO SUMMARY: In Kansas City, members of the Regional Laboratory Alliance (RLA) had a common purpose in forming their network four years ago—to preserve their status as laboratory provider for a major managed care plan in their area. After successfully attaining that goal, RLA's member labs are preparing to raise the bar and implement some ambitious service enhancements.

IN KANSAS CITY, nine member laboratories of the **Regional Laboratory Alliance** (RLA) continue to expand their network and add services.

RLA currently has contracts with two managed care companies, involving about 400,000 beneficiaries. To prepare itself for the next generation of service projects, it hired its first executive director on June 1, 1999.

"After four years of operations, we were ready to have a full-time executive director lead the expansion of our network's capabilities," said Anne B. Byrd, Administrative Director at **St. Luke's Hospital** in Kansas City. "We've done well with our existing infrastructure, but we need become more sophisticated if we are to move to the next level."

"Since my arrival in June, we've discussed three areas for attention," said Terry Kirby, RLA's new Executive Director. "The biggest priority and first on the list is connectivity of our information systems. It's time for all of RLA's data input and reporting needs to be handled in a uniform manner.

"Second, we are actively working to expand our disease management resources," he noted. "RLA now provides a variety of data to managed care plans that support their HEDIS and NCQA monitoring needs. However, we want to proactively move ahead on that curve. RLA wants to be first to provide payers with a more complete spread of disease management information and data."

Single-Source Billing

"Third, we need single-source billing and collections. This will strengthen our relationship with payers and the physician offices served by our outreach program," stated Kirby. "RLA's member labs are ready to tackle this project."

RLA was originally founded in 1995 in response to the news that the area's major managed care plan was going to move to an exclusive laboratory provider panel. This threatened to exclude the lab outreach programs of RLA's nine member labs.

It is organized as a messenger model network. **Mayo Medical Laboratories** (MML) acts as the messenger and pro-

vides reference lab testing services. RLA's executive director is a full-time employee and his compensation is funded by the members of RLA.

"RLA's defining mission has been to maintain our labs' access to the payers," explained Byrd. "For that reason, we have not emphasized shared testing among our members. RLA labs have their own courier arrangements, and Mayo contracts with our couriers to pick up their specimens.

"Our network is funded by the member hospitals," she continued. "Each month, all expenses of the network are tallied and the member hospitals pay their proportional share."

One interesting aspect of the RLA network is that it has not stimulated the pathologists at the nine participating laboratories to develop some type of collaborative marketing relationship.

Core Support Group

"That may be because each of our member labs is concentrating on its own laboratory outreach program," offered Byrd. "From the start, however, there has always been a core group of pathologists among our nine laboratories who've provided consistent support to RLA and its goals."

One confirmation of that support and the respect RLA has gained among local physicians is a recent request for assistance. "A PSO [physician system organization] contacted us several weeks ago," said Byrd. "They were thrashing with the problem of how to evaluate their physician members, as required by many HMOs.

"The PSO contacted RLA because they wanted to go further than simply looking at utilization patterns of their physicians," she continued. "They wanted other ways to look at the quality of care provided by a physician, as demonstrated by how physicians used laboratory testing in their practice."

Managed Care Plan Prefers Its Hospital Lab Providers

"Creating this laboratory network was the best move we ever made," said Anne B. Byrd, Administrative Director of St. Lukes Hospital. "Our relationship with ***HealthNet,*** *the major managed care plan in our area, is superb.*

"In the four years since we began, HealthNet has increasingly become more exclusive in favor of our network," added Byrd. "They tell us they get virtually no complaints from the outreach testing services our hospital labs provide to their physicians and patients.

"In fact, recently one of the hospitals in the city changed its lab outreach program," she continued. "We were surprised and pleased when the managed care company actually called our network and asked us to provide lab testing services in that sector of the Kansas City metropolitan area! That vote of confidence certainly confirms that RLA's service is competitive with other laboratory providers!"

As this episode demonstrates, Kansas City's Regional Laboratory Alliance has earned the respect of physicians in the community, as well as the managed care plans it serves (see sidebar above). From this perspective, it has succeed in one of its primary missions.

On the other hand, for more than four years, RLA's member labs have hesitated to explore consolidation and integration opportunities available to them through their lab network. This illustrates one of the weaknesses of the regional laboratory concept.

The independence of member labs in the network inhibits the ability of the network to generate even greater benefits to its members. Notwithstanding this fact, RLA's sustained string of operational and market successes should be recognized as a positive accomplishment. TDR

For further information, contact Anne B. Byrd at 816-932-3318 and Terry Kirby at 913-829-1461.

INTELLIGENCE

LATE & LATENT

Items too late to print, too early to report

There's a new for-profit hospital player out there which probably needs a good laboratory leader. **Iasis Corp.** of Nashville, Tennessee just spent more than $800 million to buy 15 hospitals. Iasis is a hospital management company. It expects both deals to close in October. Odds are that Iasis will need to create a position for national director of laboratories within a few months.

MORE ON...IASIS CORP.
Iasis is purchasing ten hospitals from **Tenet Healthcare** for $520 million. The hospitals are located in Arizona, Florida, and Texas. Iasis purchased another five hospitals from **Paracelsus Healthcare Corp.** for $280 million. The Paracelsus hospitals are all located in Utah.

Pathology Service Associates (PSA), the national network of pathology practices, expanded into Pennsylvania during the year. This brings the number of states with active PSA member practices to eleven.

AFFYMETRIX'S GENE CHIP IDENTIFIES "AGING" GENES

Affymetrix Inc.'s "lab-on-a-chip" technology helped researchers at the **University of Wisconsin** at Madison identify as many as 6,000 genes that play critical roles in the aging process. Affymetrix's technology permits rapid scanning of DNA to identify changes in activity in hundreds of genes at a time.

ADD TO...AFFYMETRIX
The ease with which researchers in this project accomplished their goals demonstrates how the rapid microminiaturization of laboratory processes is transforming research laboratory practices. The day approaches when this technology will be feasible for use in clinical laboratories.

For at least six months, there have been plenty of rumors that the **Dynacare-Hermann Hospital** laboratory partnership in Houston is dead as a consequence of the merger between Hermann and **Memorial Hospital**. Regardless of the truth of these rumors, just the fact that this venture may be terminated illustrates the unbusinesslike thinking of many senior hospital administrators. When Dynacare's Bill Pesci and Hermann's Sylvia Skotak presented the joint venture to the *1998 Executive War College*, it was a public declaration, with supporting numbers, that this partnership was profitable and considered successful by both parties. Thus, it boggles the mind that Memorial's senior administrators would consider pulling the plug on a lucrative source of existing and future profits, not to mention the enhanced lab services that a higher-volume lab can provide its inpatients. Is this another instance of the "not invented here" syndrome?

Here's an important fact: **Wiess Ratings** of Palm Beach Gardens, Florida reports that, among the nation's 55 **Blue Cross** and **Blue Shield** plans, 45 (82%) lost an aggregate total of $835 million on underwriting in 1998! It's the third time in as many years that this has occurred. Investment income of $1.2 billion offset underwriting losses. Such losses mean little hope for increases to lab testing reimbursement.

That's all the insider intelligence for this report.
Look for the next briefing on Monday, September 20, 1999.

THE DARK REPORT

UPCOMING...

- *Part Two: More Management Myths that Led the Laboratory Industry Astray.*
- *Managed Care Contracting Breakthroughs: First News about a Winning Technique.*
- *Pathology Part A Compensation to be Topic of Approaching Income Symposium.*
- *Effective Strategies for Taking Consolidated Hospital Labs to the Next Level.*