2003

Diagnostic Imaging Center Market Report

VERISPAN

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VERISPAN
THE TRUE MEASURE OF HEALTHCARE

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1.0 INTRODUCTION

1.1 Overview

The use of imaging has contributed to many improvements in patients' health and well being through early detection of disease and/or the application of non-invasive treatment. As of November 2002, Verispan identified a total of 4,773 diagnostic imaging centers (DICs)—an increase of 14.8% over 2001. For this report, Verispan is only referring to the 3,166 profiled DICs for which detailed operations and utilization data has been collected, unless otherwise stated.

The healthcare objective for DICs is to facilitate the identification of diseases and disorders at an early stage and provide physicians with non-invasive methods of diagnosing disease or injuries at reduced cost. The industry develops cost-effective diagnostic imaging technologies and works to minimize risks associated with these technologies. Radiologists are the primary personnel employed in diagnostic imaging centers, although radiologic technologists are also found in most centers.

Demand for the radiology specialist is very high and the supply is not meeting that mark. The disparity has been labeled a crisis as physicians are ordering a high volume of diagnostic tests for the aging population. Radiologists are exiting the profession due to early retirement, rising malpractice rates, and changes in physician practice styles. The American College of Radiology (ACR) estimated 1,000 entries and 500 exits to the field in 2001.

The shortage of radiologists and the expansion in the number of images ordered has produced the revenues to increase salaries with the pay range for radiologists at a high point. The Medicare cut of 5.4% in 2002 never slowed the radiology recruiting market down, and the last minute reversal of the 4.4% cut that had been scheduled for March 2003 will continue to float the pay inflation in this field.[1]

[1] Physician Compensation Report, March 2003

The ACR estimates that over 300 million diagnostic imaging procedures were performed in the United States during 1999, the most recent year for which data are available, generating an estimated revenue of over $60 billion, or 5% of total healthcare spending. Furthermore, the ACR estimates that over 60% of this diagnostic imaging revenue was generated on an outpatient basis.

The technology-driven field of radiology becomes more technical every day for the specialist. There are many modalities of imaging and new applications are developing rapidly. Although most images are taken and interpreted by radiologists, there is a growing number of physicians in other specialties that interpret diagnostic imaging. For competitive reasons, private DICs are purchasing expensive technology that was formerly found only in hospital imaging departments. Financial concerns still exist but prices are falling for picture archiving communication systems (PACS) so that the private sector can now take advantage of filmless imaging. The value in productivity improvements through efficient image interpretation and faster turnaround time increases a DIC's chances for long-term success.

A rising interest in nuclear medicine technologies was signaled by the response to the PET Learning Center courses given by the Society of Nuclear Medicine (SNM). The SNM, in turn, will increase its positron emission technology course offerings in 2003 and will add a separate PET/computed tomography (CT) fusion imaging course.

CT, in particular, is utilized more often as high-tech body scans have become very popular. A battle between the medical establishment and the for-profit sector ensued in 2002. According to a Johns Hopkins study published in the February 2003 *Journal of the American Medical Association*, the number of lives potentially saved by annual screening with CT might be outweighed by the cost of the procedure and by the harm of unnecessary follow-up tests for "positive" findings that turn out to be benign. The long-term benefits and risks have not been adequately researched and they're said to not be cost-effective. The controversy has done nothing to slow down the growth of these centers that often screen with CT equipment.

As overall healthcare costs are on the rise there is a shift from tightly controlled managed care to a more relaxed environment. Preferred provider organizations (PPOs) are growing in membership throughout the healthcare provider industry, and this is reflected in the number of DICs that contract with them. For radiologists who cannot or do not want to retire, cutting the size of their practice by opting out of an insurance plan is one way to improve their quality of care and life. Alleviating managed care pressures frees up time to focus on increasingly important issues of over-all practice performance including patient satisfaction, physician retention, accounts receivable, workflow efficiency, and competitive technology.

1.2 Definitions

Verispan defines a DIC as *a facility whose primary business activity is diagnostic imaging or a significant portion thereof, in the case of multi-specialty clinics. Equipment must be located at the facility, except for mobile units. Also, the facility must offer outpatient care and be freestanding, not attached to a hospital in any physical way, unless separate ownership or management exists.*

Verispan defines a DIC multi-facility chain as *a facility that owns or manages two or more DICs.*

1.3 History

Driven by the growth of managed care and Centers for Medicare and Medicaid Services (CMS) reimbursement constraints for inpatient costs, diagnostic imaging services experienced a shift from hospital settings to freestanding centers in the early 1980s. While physicians and hospitals developed many of these imaging centers, a subsequent change in federal law restricted the referral of patients by a physician to a facility in which the physician maintained an ownership interest. As a result, many physicians sold their interests in imaging centers to hospitals, radiologists, and companies engaged exclusively in the ownership, operation, and management of imaging centers.

Massive healthcare consolidation has left small independent physician groups and individual practices at a competitive disadvantage to larger associations or networks of physicians because they often lack the capital necessary to cover a wider geographical area, offer an array of imaging modalities, and obtain new technologies. These individual and small DI facilities are encountering higher operating costs and less purchasing power than their consolidated counterparts. The situation also led to strategies targeted at reversing the trend of under utilized imaging equipment within some providers' facilities, and accelerating consolidation to centralize resources and gain access to the benefits of alliances with managed care organizations, integrated healthcare networks (IHNs), and group purchasing organizations (GPOs).

1.4 Legislation

Ambulatory Payment Classification (APC) System

In the Balanced Budget Act of 1997, Congress mandated that the Centers for Medicare and Medicaid Services (CMS) implement a hospital outpatient prospective payment system (OPPS). The payment system centers on payment groups known as ambulatory payment classifications (APCs), which categorize procedures into code sets based on the type, nature, and costs of service. CMS funded the development of the ambulatory payment classification (APC) system to reduce the payment disparities between freestanding outpatient facilities and hospital outpatient departments. Beginning in 2003, APCs applied to all covered outpatient services, including radiology. APC groups are packaged. For example, CT and magnetic resonance (MR) scans, both with and without contrast, are incorporated into the same payment group. They are then assigned a weight that is multiplied by a conversion factor to produce a payment amount. That weight is calculated from median hospital costs as reported up to June 1997. The annual review of components and revisions, if necessary, does not apply to the 1997 base numbers which remain the same.

HEALTH Act

The Help Efficient, Accessible, Low Cost, Timely Health Care (HEALTH Act) HR 4600 was passed by the House of Representatives in September 2002 in an effort for tort reform. If signed

into law, the act will limit the dollar amount that can be collected for punitive and non-economic damages, control excessive lawyer contingency fees, and allow defendants to put aside money for future damages from lawsuits. The overarching goal of the act is to improve patient access to health care services and provide improved medical care by reducing the excessive burden the liability system places on the health care delivery system. The HEALTH Act models California's Medical Injury Compensation Reform Act (MICRA), which is thought to be successful in controlling litigation costs while compensating patients sufficiently.

HIPAA

In 1996, the Health Insurance Portability and Accountability Act (HIPAA) was established to streamline electronic patient transactions across all healthcare entities and to protect patient privacy by limiting the disclosure of personal medical information. Under this rule, a national standard developed by the American National Standards Institute (ANSI) will be implemented on unique identifiers, electronic signatures, and coding systems for diseases, symptoms and other health problems. The privacy rule will allow patients better access to medical information, control over the use of medical information, and rights to appeal should their privacy be jeopardized. The compliance date for installing electronic changes is October 16, 2003, while the deadline for instituting privacy standards is April 14, 2003.

Mammography Quality Standards Act

The Mammography Quality Standards Act (MQSA) of 1992 and subsequent Reauthorization Act of 1998 (which extended the program to 2002) were set by the Food and Drug Administration (FDA) in order to reinforce the nation's standards for centers performing mammography screening. Under MQSA, all mammography centers must meet certain stringent standards for equipment, personnel, and image quality; be accredited by an FDA-approved accreditation body; be MQSA-certified; be inspected annually; and conduct a medical outcomes audit program as part of its overall quality assurance effort. The Reauthorization Act provides specifications on physician-patient communication regarding mammogram results. Congress enacted MQSA to ensure that all women have access to quality mammography for the detection of breast cancer in its earliest, most treatable stages.

Stark Law

The federal Stark Law and regulations were passed to regulate a physician's opportunity to profit from referrals and/or clinical laboratory services in 1989. The statute became known as Stark I. The law was subsequently expanded on January 9, 1998 to include coverage of a variety of designated services including DIC services, and was referred to as Stark II.

A major change in Stark II was the definition of radiology. The ruling provided increased flexibility to radiologists by adopting a broad definition of consultation. The rule also contains special considerations that outline a less restrictive definition of a group practice. Special considerations of the law will have an impact on time-share arrangement, mobile services, and per procedure leases. There is still debate over how federal self-referral regulations will handle situations in which medical institutions pay physicians on a percentage basis. The CMS has delayed for the second time the percentage-based compensation part of the physician self-referral law. At this time last year, the government moved the effective date from January 2002 to January 2003 because changes weren't made in time. But with modifications still in the works as the deadline approached, CMS pushed that portion of the rule's effective date to July 7, 2003.

1.5 Technology

Recent advances in imaging technology are numerous. CT scanners in particular have garnered much attention for a variety of uses. So much attention in fact, that the National Electrical Manufacturers Association (NEMA) has forecast sales in 2003 and 2004 to be as many as 350 to 400 units each quarter. The clinical images produced by a 16-slice CT scanner are undeniably acclaimed. Neurological and lung studies should gain from non-invasive procedure opportunities. Changes for cardiovascular studies are also exciting as the technology is expected to be capable of providing more comprehensive information about the anatomy and function of the heart and coronary arteries. Right now it is an uphill battle for a hospital, much less a freestanding DIC, to purchase the technology for clinical rather than research use. Like PACS, productivity can increase substantially only if other work processes are streamlined to take advantage of the 16-slice scanner's imaging speed. To bill even one additional CPT code per

day amounts to a substantial additional annual income. There is also the possibility that technologist overtime could be cut back in some centers. As value is shown, acceptance and strategies for acquisition of these expensive systems could change just as it did for PET. At that point, it will be viewed as justification to prevent the erosion of patient base to hospitals. Like all new technologies it will also have a role in recruiting and retaining professional staff.

One promising use of imaging's newer technologies is in the examination of the colon. Colon cancer is the second leading cause of cancer deaths in the United States with a projected incidence of approximately 135,400 new cases and 56,700 deaths in 2001 according to the American Cancer Society. Conventional screening examination for colorectal cancer has been the "gold standard" of methods. However, patient compliance is affected because it is invasive and time-consuming. For practitioners, the downside of traditional exams is that they do not permit passage through obstructions or twisted portions of bowel. A report from the United States Congress Office of Technology Assessment associates colonoscopy with the risk of bowel perforation (1:1000 procedures) and mortality (1:5000 procedures).

One recent advance in imaging technology allows three-dimensional and virtual endoscopic models to be constructed from helical computed tomographic (CT) data sets. Virtual endoscopy has been used to evaluate the colon, bronchi, stomach, blood vessels, bladder, kidney, larynx, and paranasal sinuses. The most promising role of virtual endoscopy is in screening patients for colorectal cancer.

Helical, or spiral, CT scanning permits continuous imaging as the radiographic tube rotates around the moving patient, whereas conventional CT scanning is limited to a series of 360° slices through the stationary patient. Helical CT scanning offers several advantages. It is faster than the conventional technique and provides more information. Virtual colonoscopy has greater sensitivity and specificity in identifying colorectal polyps. The procedure can lead to increased patient compliance because it is faster and less invasive than colonoscopy. It also does not involve sedation or significant loss of work time.

It is only the conventional screening examinations for colorectal cancer that are currently eligible for Medicare reimbursement. The new method is being studied at research centers. Researchers acknowledge areas for improvement in the technology such as processing time and cost. Still, some centers no longer consider virtual colonoscopy a research protocol and are offering it as a screening tool. With continuing advances in software and hardware, virtual endoscopy and colonoscopy offers the promise of quicker and cheaper methods of evaluation. In certain clinical situations, it may enhance diagnosis, preoperative planning, operative technique, and postoperative follow-up. Primary care physicians will become more familiar with this new imaging method as more clinical applications become apparent.

Magnetic resonance imaging (MRI) continues to offer new diagnostic approaches. Female infertility is the beneficiary of a 3D MR-based imaging procedure that offers direct visualization of the fallopian tubes and spares the ovaries radiation exposure. The approach is still being studied and looks to be useful as a more accurate and efficient evaluation in diagnosis related to recurrent pregnancy losses.

The technologies highlighted are only a sample of many recent advances for diagnostic imaging. Any relief by way of new cost-effective technology and applications to diagnose, evaluate, and assist determination of surgical approach is welcomed by a market where delays in routine radiological exams have a lot of doctors and patients worried.

1.6 Competition and Growth

Within the field of radiology a distinction is seen in the survival opportunities of private versus academic radiologists. Both groups face the same pressures: the shortage of radiologists and technologists, declining interest in academic radiology, and market competition brought on by other specialties. Academic radiology is competing with the research and clinical trials conducted by other specialists such as cardiologists. Inflationary levels of compensation are attracting many of radiology's younger generation to private practice and away from the research

that contributes to the specialty's long-term survival. If this trend is not reversed it could add to the erosion of a field that already faces growing competition from several other market segments.

In addition to continued competition with each other, DICs compete with hospitals, medical group practices (MGPs), and outpatient surgery centers (OSCs) for imaging market share. The volume of healthcare providers outside of radiology that are using advanced technology equipment and are working towards effectiveness in cost, quality, and productivity continues to increase. Hospitals, OSCs, and MGPs provide imaging services to 87.0%, 44.2% and 49.7% of their markets, respectively.[2]

In private practice, a growing niche of boutique imaging centers marketed to consumers rather than sick persons is vying to become the standard. These mostly self-pay consumers desire early determination of patient risk to such physical maladies as cancer, heart disease, stroke, and osteoporosis through ultra-fast three-dimensional CT scanning, digital mammography, ultrasound and computer-aided diagnostic and communications software.

The short history of body scanning can be recorded in one of two ways. It is either a successful preventive strategy to diagnose disease early and quickly enough to cut long-term healthcare costs overall, or it's merely a means to allow the wealthy to get a diagnosis earlier, which means they can get treatment earlier than the rest. There are no two ways about the fact that within the industry body scanning is controversial.

Among the reasons that full body scanning hasn't gained wide acceptance in the medical community is that it is viewed as a flagrant revenue grab. It didn't help matters either that insurance companies questioned the medical necessity of these high-priced procedures. The result was declined reimbursement. That only succeeded in economically stratifying who would participate because body scan patients would have to pay out of their own pockets. For

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[2] *Verispan Hospital Market Profiling Solution*©, *Verispan Outpatient Surgery Center Profiling Solution*© and the *Verispan Medical Group Practice Profiling Solution*©

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consumers who value convenience and comfort as much as early detection, the goal is to provide a higher level of service, with a faster turnaround time, and often, a very cushy environment that could be mistaken for an upscale hotel rather than a typical medical facility. There have certainly been failures along with the successes in the brief history of the growth of body scanning facilities. Still, facilities and franchises continue to sprout around the country, and for the last two years, diagnostic imaging equipment manufacturers have reaped record sales and couldn't make the units fast enough.[3]

It is not news that radiology is not proprietary to radiologists, but just how much of the imaging pie has been lost to other specialists? Emergency room physicians are using ultrasound for IV access and foreign body localization; many cardiology groups have CT capabilities with echo and gamma camera equipment in their offices; orthopedists use lower cost extremity and full-body MRI machines; oncologists and gastroenterologists utilize CT scans and CT colonoscopy, respectively. MRI, CT, and interventional radiology have all experienced steady annual growth, and outpatient imaging in general has grown about 10% per year between 1986 and 1998. During this same period, however, the actual amount of imaging performed by cardiologists jumped 600%, or 23% per year. All other physicians handled a steady 16% share of overall volume. These findings were revealed at the Educational Symposia's Economics of Diagnostic Imaging 2002: National Symposium in Pentagon City, Va. It was also revealed that radiology's share of the imaging workload measured in relative value units (RVUs) dropped from 79% in 1986 to 58% in 1998, despite a 4% annual growth rate in RVUs for radiologists during the period.

Cardiology's share of imaging as measured in RVUs rose from 5% to 25% over the same period. While radiology's share of the total imaging pie is smaller, the pie itself has grown fast enough to give radiologists much more business. Total imaging grew 8.5% per year in the 12-year study period and continues to double every nine years, according to the report.[4] All this leaves

[3] First Moves, "Invasion of the Body Scanners", Nov/Dec 2002.
[4] DiagnosticImaging.com, Newsclips, "Cardiologists take a big bite out of medical imaging", www.dimag.com/magazines/di/newsclips.shtml#E.

radiologists to strategize how the profession can retain its status as the medical imaging profession.

DICs have focused on a profitable growth strategy over the past year. This growth strategy is geared toward a selected market, attaining a leadership position in those markets, and aligning with key referral sources. Smaller independent facilities lacking the ability to offer subspecialty imaging services and reap the lower cost benefits of affiliation to larger organizations are striving to be more competitive.

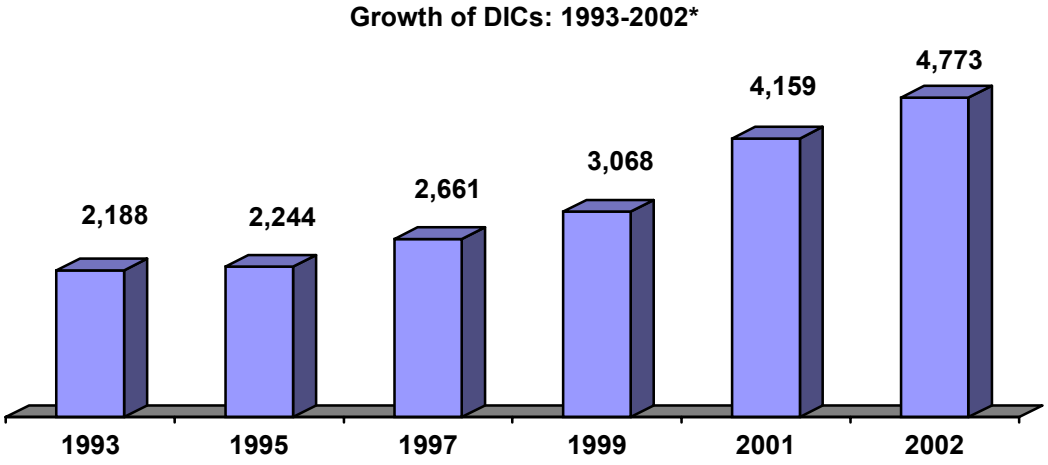
There are several key factors to remaining viable in the DIC industry:

1. *Cost Containment Pressures:* Pressure to accept lower reimbursements from Medicare, Medicaid and managed care organizations continue to force the industry to cut costs. Based on implementation of the OPPS, DICs face further reductions in contract reimbursement rates with hospitals as reimbursement continues to decline for many outpatient procedures.

2. *Technological Developments*: As technology leaps forward in DI equipment, centers must meet these advances. Capital expenditures are required to make that happen. Partnering with equipment manufacturers and sharing equipment with hospitals provide a means for financing these advancements. The utilization of mobile imaging equipment also provides an affordable alternative that is growing in popularity.

3. *Competition*: Diagnostic services are being provided by other segments of the healthcare industry. As a result, DICs must continue to market quality of care, subspecialty expertise, and patient and referring physician satisfaction to direct the utilization of imaging services to their facilities. A focus on developing relationships with referral physicians and hospitals is key to determining important referral patterns.

Despite many challenges noted, growth has not at all slowed down for freestanding diagnostic imaging. The following graph shows the growth of DICs from 1993 to 2002.



*Total number of identified DICs – profiled and non-profiled

Visits to imaging centers have reached 200,000 annually for the busiest freestanding entity that responded to Verispan's census. Mercy Radiology in Pittsburgh, Pa. ranks first in highest visit volume. Like most of the imaging centers in the list of top twenty DICs based on the number of visits, Mercy offers X-ray, ultrasound, mammography, CT scan, MRI, bone density, and nuclear medicine. With the exception of West End MRI, whose name is a hint to its exclusive single offering, all of the top 20 listed below offer several imaging modalities.

The following table illustrates the top twenty DICs based on the number of visits.

Top 20 DICs Based on the Number of Visits

Name of DIC	City	State	Visits
Mercy Radiology	Pittsburgh	Pa.	200,000
Jackson Radiology Associates	Jackson	Tenn.	175,000
Southwest Diagnostic Imaging Center	Dallas	Tex.	132,600
Long Island College Radiology	Brooklyn	N.Y.	120,000
Riverside M R I	Newport News	Va.	115,000
Washington Radiology Associates	Fairfax	Va.	105,700
New York Methodist Radiology	Brooklyn	N.Y.	95,000
Medical Imaging Ctr Of Boca Raton	Boca Raton	Fla.	92,820
Penn Radiology	Phoenixville	Pa.	80,600
River Oaks Imaging & Diagnostics	Houston	Tex.	80,600
Northern Westchester Radiology	Mt Kisco	N.Y.	76,000
Radiologic Associates at Horton Med Ctr	Middletown	N.Y.	75,500
Radiology & Imaging Specialist	Lakeland	Fla.	75,000
West End M R I	Richmond	Va.	72,800
Women's Imaging Center	Austin	Tex.	72,000
Gulf Coast Radiology	Biloxi	Miss.	68,900
Fresno Imaging Center	Fresno	Calif.	68,000
Women's Imaging at Methodist Plaza	San Antonio	Tex.	68,000
Insight Imaging Diagnostic Center	Phoenix	Ariz.	67,000
Community Radiology Associates	Bethesda	Md.	66,300
Booth Radiology	Woodbury	N.J.	65,000
		TOTAL	**1,971,820**

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2.0 DEMOGRAPHICS

2.1 National Distribution

Between November 2001 and November 2002, Verispan identified a total of 4,773 DICs in the nation, resulting in an increase of 14.8% in the total number of DICs from the previous year. The number of DICs will continue to increase with the aging of the baby boomer generation. Studies show that imaging utilization rises with healthcare utilization, as people grow older.

The following table arrays the aggregation of the data for those DIC entities that responded to Verispan's Diagnostic Imaging Center Census of Annual Visits and Annual Charge.

Aggregate Data

Annual Visits	14,132,426*
Avg Visits per DIC	14,663*
Average Charge	$797**

*sample of 900 DICs

**sample of 643 DICs

DIC Visits by State

State	DICs	Visits	Average Visits
Alabama	14	194,086	13,863
Alaska	1	5,300	5,300
Arizona	24	433,920	18,080
Arkansas	6	50,140	8,357
California	76	1,163,644	15,311
Colorado	4	56,850	14,213
Connecticut	24	413,580	17,233
Delaware	11	137,512	12,501
Florida	85	1,315,016	15,471
Georgia	30	333,511	11,117
Hawaii	1	8,000	8,000
Idaho	3	41,600	13,867
Illinois	34	202,513	5,956
Indiana	26	261,756	10,068
Iowa	2	19,380	9,690
Kansas	12	87,260	7,272
Kentucky	10	75,140	7,514
Louisiana	16	216,034	13,502
Maine	2	12,800	6,400
Maryland	37	773,240	20,898
Massachusetts	17	183,312	10,783
Michigan	13	237,296	18,254
Minnesota	10	112,304	11,230
Mississippi	5	94,600	18,920
Missouri	10	87,692	8,769
Montana	3	22,920	7,640
Nebraska	2	11,840	5,920
Nevada	3	90,480	30,160
New Hampshire	1	26,000	26,000
New Jersey	49	783,202	15,984
New Mexico	3	39,000	13,000
New York	83	1,752,606	21,116

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State	DICs	Visits	Average Visits
North Carolina	13	321,586	24,737
North Dakota	3	105,560	35,187
Ohio	55	504,359	9,170
Oklahoma	9	153,960	17,107
Oregon	6	106,000	17,667
Pennsylvania	68	981,634	14,436
Rhode Island	5	50,579	10,116
South Carolina	11	127,789	11,617
South Dakota	N/A	N/A	N/A
Tennessee	12	343,400	28,617
Texas	50	1,146,341	22,927
Utah	2	24,096	12,048
Vermont	N/A	N/A	N/A
Virginia	25	636,560	25,462
Washington	15	278,548	18,570
Washington, D.C.	2	47,580	23,790
West Virginia	1	13,000	13,000
Wisconsin	5	46,560	9,312
Wyoming	1	2,340	2,340
TOTAL	**900**	**14,132,426**	**14,663**

States reporting the largest number of DIC visits are New York, Florida, California, Texas, and Pennsylvania. The above table provides counts of DICs by state in accordance with responses to the *Diagnostic Imaging Centers Census*. DICs that did not respond with visits data are not included in the count by state. However, it is worth noting that the ranking of top five states by visits, as self-reported by the profiled DICs, corresponds with the ranking of total imaging centers by state for the universe as tracked by the *Verispan Healthcare Market Index* (HMI). The total number of DICs is as follows: 381 entities in New York, 367 entities in Florida, 294 entities in California, 200 entities in Texas, and 169 entities in Pennsylvania.

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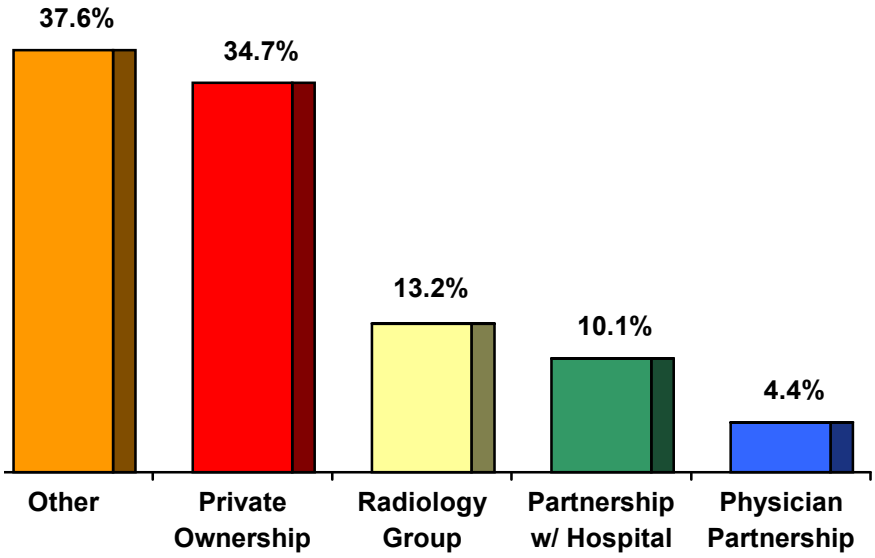
2.2 Ownership/Sponsorship

As shown in the following chart, private ownership captures the largest share of the market (34.7%)—up from 29.7% last year—outside of the institutional facilities that make up the category of "Other."

Ownership of Diagnostic Imaging Centers



*Other includes university facilities, government facilities, hospital-owned facilities, and public companies/corporations.

2.3 Multi-Facility Chains

Multi-facility chains have a strong presence with a 46.1% share of the DIC market or 2,198 DICs affiliated with a multi-facility chain in November 2002. This percentage reflects an increase of 32.3% from 1,661 DICs in November 2001.

In 2002, HealthSouth, still the nation's largest DIC multi-facility chain, remained in first place although with four fewer imaging centers than last year with 140 DICs. Followed by Tenet Healthcare Corporation and, in third place, Radiologix, Inc. which replaced Insight Health Services, now the eighth-largest imaging chain.

HealthSouth

Based in Birmingham, Ala., HealthSouth is the nation's largest provider of diagnostic imaging. Each diagnostic imaging center has the latest equipment and technology as well as board certified physicians and skilled technologists. The services offered include: MRI, CT Scan, Ultrasound, Mammography, Nuclear Medicine, PET Scan, Bone Density, Electromyography (EMG) and Nerve Conduction Studies (NCS). In the last year, HealthSouth has expanded their relationship with Source Medical Solutions Inc. to implement SourceRad. SourceRad is a complete radiology management solution that is now in more than 130 HealthSouth diagnostic centers.[5]

The April 15, 2002 listing of the Fortune 500 rated HealthSouth #374, up from #400 in the 2001 listing. Although, it is not through imaging alone that this rating was accomplished. HealthSouth is also the nation's largest provider of rehabilitative healthcare and outpatient surgery services. Patients receive non-emergency surgeries at its outpatient surgery centers, imaging services at its diagnostic centers, and treatments for work-related illnesses and injuries at its occupational medicine centers (which it is selling). Although HealthSouth experienced a lot of changes over the past year, it was not seen in their diagnostic imaging business. Medicare's change in definition for billing rehabilitative services for 'group therapies' has had an adverse impact on the company. As a result, Richard M. Scrushy, passed on his role as CEO and management of day-to-day operations to William T. Owens, President and COO.

[5] www.healthsouth.com

Tenet Healthcare Corporation

Tenet Healthcare Corporation, through its subsidiaries, owns and operates acute care hospitals and numerous related healthcare services. Tenet and its subsidiaries employ approximately 114,300 people serving communities in sixteen states. Tenet's name reflects its core business philosophy: the importance of shared values among partners—including employees, physicians, insurers and communities—in providing a full spectrum of healthcare. The acute care hospitals serve as cornerstones to vast regional health care delivery networks, which includes the delivery of imaging services. Other regional networks include specialty hospitals, outpatient surgery centers, home health agencies, rehabilitation hospitals, psychiatric hospitals, HMOs, and long term care.

Like many companies in the industry, in 1999 Tenet began feeling the effects of the Balanced Budget Act of 1997, which mandated more scrutiny of Medicare expenditures to healthcare providers. In response, the company began divesting some of its hospitals; it also shed its practice management business and reorganized its corporate structure. Tenet has continually rebounded and the company has been acquiring healthcare entities in 2001 and 2002. Also, in 2002, Federal authorities announced that Tenet was being investigated for its Medicare billing practices, and for performing unnecessary surgeries.

Radiologix

Radiologix is the third largest operator of freestanding radiology and diagnostic imaging centers in the United States. Based in Dallas, Radiologix currently owns 116 imaging centers in eighteen states, with concentrated markets in California, Florida, Kansas, Maryland, New York, Texas and Virginia.

Radiologix has seen a steady increase in market capitalization over the past two years. The corporation catapulted into the top five imaging chain range after gaining thirty-six facilities from an acquisition of Questar Imaging, Inc. in 2000. In addition, the company's physician relationships serve as a built-in referral source for the imaging centers.

In July 2002, Radiologix was recognized on the Russell 3000 and Russell 2000 indexes. The Russell 3000 index measures the performance of the 3000 largest U.S. companies based on total market capitalization, while the Russell 2000 measures the smallest 2000 companies of the Russell 3000

About 75% of Radiologix's sales come from its diagnostic imaging business, which includes the production and management of general radiology, X-ray, MRI, CT, mammography, ultrasound, nuclear medicine, PET, radiation oncology and fluoroscopy.

The following table lists the top twenty DIC multi-facility chains based on the number of owned and/or managed DICs as of November 2002. Together the combined number of facilities owned and/or managed by top twenty DIC multi-facility chains totals 1,140, up from 869 in November 2001.

Top Twenty DIC Multi-Facility Chains by Owned/Managed DICs

DIC Multi-Facility Chains	Headquarters	Owned/Managed DICs
HealthSouth Corporation	Birmingham, Ala.	140
Tenet Healthcare Corporation	Dallas, Tex.	130
Radiologix, Inc.	Dallas, Tex.	116
MedQuest Associates	Norcross, Ga.	71
Comprehensive Medical Imaging	Westlake Village, Calif.	67
Medical Resources	Hackensack, N.J.	60
Radnet & DIS	Los Angeles, Calif.	56
Insight Health Corporation	Newport Beach, Calif.	53
PresGar Medical Imaging	Tampa, Fla.	52
Navix Diagnostix, Inc.	Taunton, Mass.	40
NYDIC Open MRI of America	Montvale, N.J.	30
Cleveland Clinic Foundation	Cleveland, Oh.	26
Regional Health Services	Warrensville Heights, Oh.	25
Horizon Medical Group	Sarasota, Fla.	25
Health Management Corp of America	Melville, N.Y.	23
Center for Diagnostic Imaging	St Louis Park, Minn.	20
Radiological Assoc – Sacramento	Sacramento, Calif.	19
American Radiology Services	Baltimore, Md.	19
HCA – The Healthcare Company	Nashville, Tenn.	19
Integral PET Associates, LLC	New York, N.Y.	19
U.S. Heartcare Management Inc	Rye, N.Y.	19
ProMedica Health System	Toledo, Oh.	19
Sonix Medical Resources	Hauppauge, N.Y.	17
Medical Imaging & Diagnostics Inc.	McLean, Va.	16
Papastavros Associates Medical Imaging	Wilmington, Del.	15
Austin Radiological Association	Austin, Tex.	15
ProScan Imaging	Cincinnati, Oh.	15
North Atlanta Scan Associates	Alpharetta, Ga.	14
	TOTAL	**1,140**

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2.4 Facility Types

Imaging procedures can be performed in either a freestanding or a mobile setting. Verispan defines a freestanding DIC as *a facility that performs procedures out of a single, non-hospital-based location, unless imaging center is owned by an entity other than the hospital. A mobile DIC must have transportable equipment providing services at one or more healthcare facilities.*

Of the two facility types, freestanding DICs dominate the diagnostic imaging market—accounting for approximately 98% of market share in 2002. Mobile DICs are rapidly becoming involved in the multi-facility chain movement and consolidating, causing a decrease in their overall percentage.

Facility Types	2002		2001		2000	
	Total	Percentage	Total	Percentage	Total	Percentage
Freestanding	3,112	98.3%	3,093	98.3%	2,671	98.2%
Mobile	54	1.7%	55	1.7%	50	1.8%
TOTAL	**3,166**	**100%**	**3,148**	**100%**	**2,721**	**100%**

3.0 SERVICES

3.1 Equipment and Services

Between November 2001and November 2002, MRI ranked highest as the modality offered at the most diagnostic imaging sites, with 65.2% of all sites reporting its usage. As seen in the following table, x-ray (56.6%), ultrasound (50.9%), mammography (48.5%), and CT scan (42.3%), in order, were ranked two through four behind MRI as the modalities offered at the most diagnostic imaging sites in 2002.

Percentage of Sites Offering Imaging Modalities

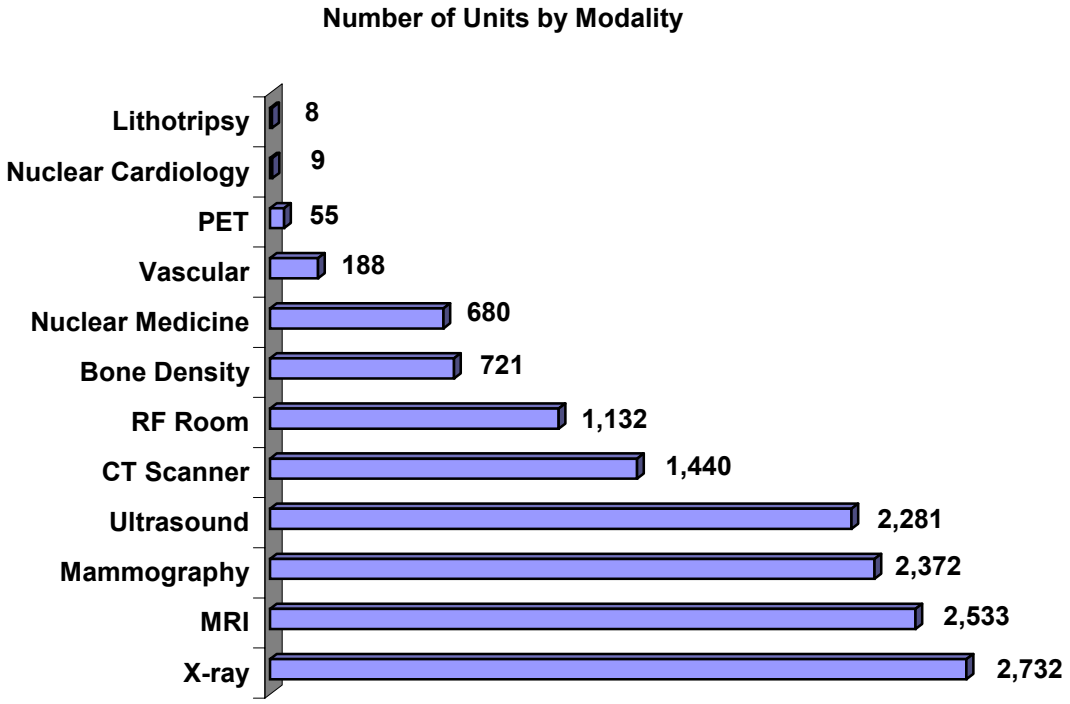
Type of Service	2002 Percentage	2001 Percentage
MRI	65.2%	54.7%
X-ray	56.6%	50.0%
Ultrasound	50.9%	45.6%
Mammography	48.5%	45.8%
CT Scanner	42.3%	36.8%
RF Room	31.9%	26.7%
Nuclear Medicine	18.1%	15.3%
Vascular	5.5%	4.1%
PET	1.7%	1.0%
Lithotripsy	0.2%	0.2%

*Sample of 3,148 responding centers

Nearly two-thirds, or 65.2%, of all DICs offer MRI services. More than half of all centers offer X-ray (56.6%), ultrasound (50.9%), or a combination of both. All modalities reported on experienced market growth, including lithotripsy (7 sites in 2002 vs. 5 sites in 2001).

In year end 2001 (November) there were 30 freestanding imaging centers offering PET services. A year later there are 55 such centers. When considering that the equipment can be about $3 million per unit, PET imaging has shown considerable growth in the outpatient setting.

The top five services by installed number of units are X-ray, MRI, mammography, ultrasound, and CT scanner. There are 1,440 CT units installed in 1,333 sites. For MRI, there are 2,533 units installed in 2,053 sites. This shows a strategic jump from initial acquisition to enhancing capability to provide the most advanced imaging technologies. The following graph displays the number of units by modality.



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Even the equipment with the highest volumes of market penetration do not have as many as two units installed on average. Nuclear Medicine has the median number of profiled sites (569) and an average of 1.20 units per site.

Average Units Per Site

Modalities	2002 Average Unit /Site	Number of Profiled Sites
Mammography	1.56	1,522
X-ray	1.54	1,771
Ultrasound	1.43	1,596
MRI	1.24	2,035
Nuclear Medicine	1.20	569
RF Room	1.17	964
Lithotripsy	1.14	7
CT Scanner	1.08	1,329
Vascular	1.11	169
PET	1.02	55
Bone Density	1.01	713
Nuclear Cardiology	1.00	9

Overall, 63.6% of respondent imaging sites, or 1,708 DICs, use a laser film printer. The table on the following page shows the utilization of laser film printers for DICs with additional data by MRI and CT sites. It is important to note that some sites have both CT and MRI installations, therefore, data on these facilities appears as part of the average for both site types. Despite the growth of digital imaging, film is in wide use for imaging display overall and specifically at MRI and CT sites.

Many DICs are unable to afford the digital equipment to replace the older film equipment. Even if they could generate the capital for an initial purchase, image storage remains the most expensive and most volatile component of PACS technology. Introducing digital technology is as much a work organizational problem as it is a technical challenge. Workflow affect is radiological and clinical as well. Additional roles and new activities not required in a film-based center would have to be introduced when transitioning to a digital DIC. Sites that have either

assessed the switch and have yet to resolve weaknesses, or have not yet figured out how to analyze the switch are maintaining their utilization of film, even where their service offerings include MRI and CT.

DICs Using Laser Film Printer

	Laser Film Printer	Total Sites Responding	Percent of Total
DICs	1,708	2,687	63.6%
MRI Sites	1,389	1,761	78.9%
CT Sites	957	1,173	81.6%

3.2 MRI Magnet Strength

MRI magnet strength is divided into three fields; high-field with magnetic strengths above 1.0 tesla, medium-field with magnetic strengths of 0.5 to 1.0 tesla, and low-field with magnetic strengths of less than 0.5 tesla. Tesla is a measurement unit of magnetic flux density given by a magnetic flux of one weber per square meter.

High field strength is known to obtain the optimal MRI image. Newer applications of imaging and new systems in neurology and psychiatry are requiring the higher resolution images that higher field strengths can attribute to. MRI systems with stronger imaging power are now being purchased at a much higher rate than in the past.

MRI Magnet Strength

Magnet Strength	Total	Percentage
High-Field	919	46.3%
Medium-Field	468	23.6%
Low-Field	596	30.1%
TOTAL	**1,983**	**100.0%**

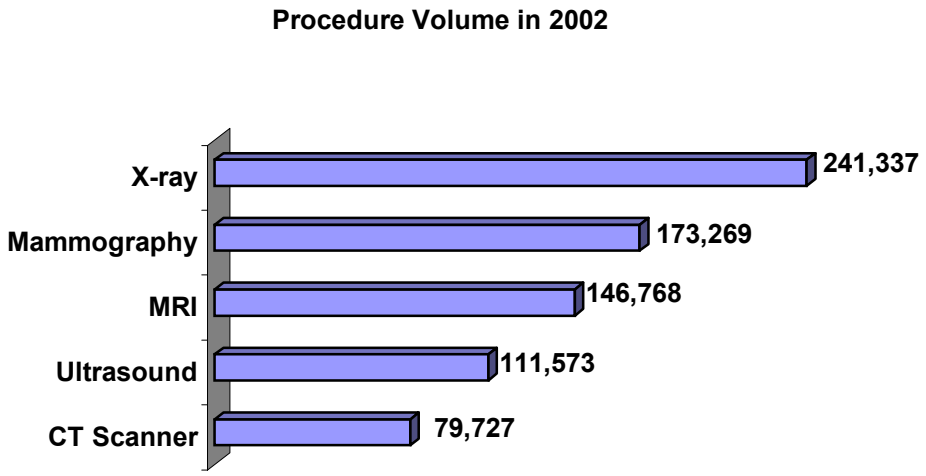
High-field MRI is typically defined as a Tesla strength ranging from 1.0 to under 3.0 in patient care other than research. Now several manufacturers are developing 3.0 Tesla scanners to fill a

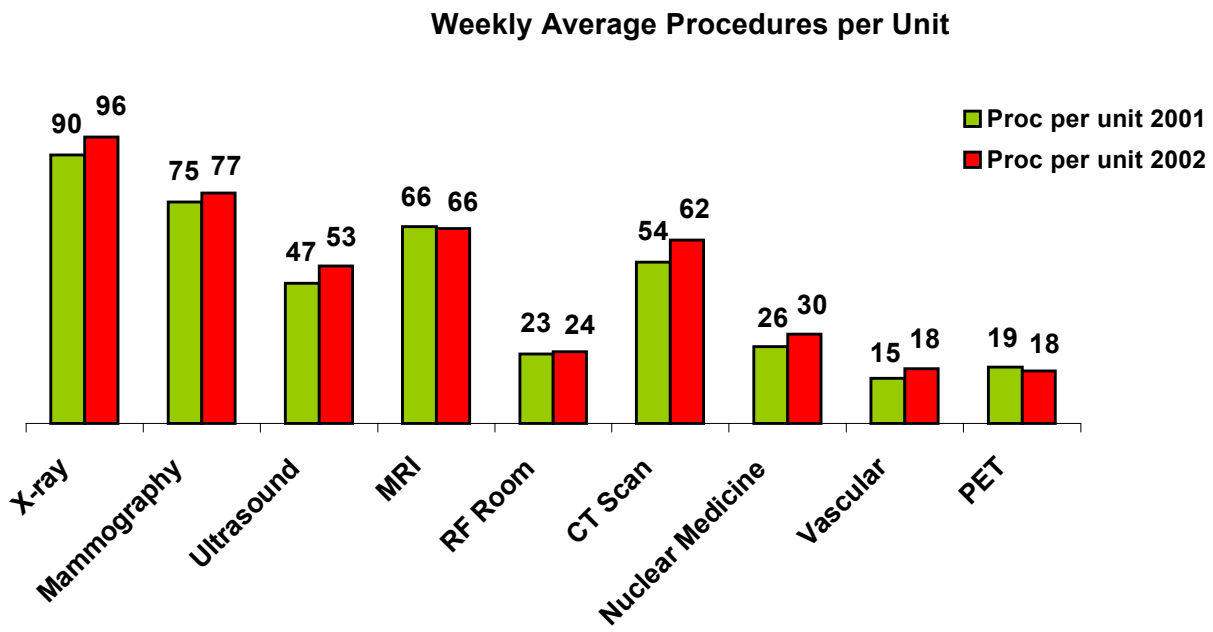
void in certain clinical applications created by the shortcomings of 1.5T machines, which have typically been at the high end of the spectrum. The higher field strength is being recognized as having clinical advantages in neuropathology, and offers promise for applications in spectroscopy, visualization of smaller vessels in angiography, and advances in orthopedic and full body imaging. Like all new technology, cost will be an issue. The price tag for the scanners will exceed that for 1.5T systems by at least $1 million. Currently, vendors are limited in how much they can reduce the cost. A superconductor wire used in the magnet forces the cost differential.

3.3 Procedures

In 2002, the total number of procedures in an average week as reported by 2,785 DICs reached 821,361, representing an increase of just over 16.2% from November 2001. As stated earlier, hospitals are a recognized competitor to DICs, although according to the *Verispan Hospital Market Profiling Solution*©, the hospital market has seen a 8.6% decrease in the total number of facilities from 1993 to 2003 (7,439 in October 1993 to 6,798 in February 2003). Of these, 84.4% or 5,735 offer one or more of MRI, CT, lithotripsy, nuclear medicine, or ultrasound, in addition to any X-ray services they may also perform. With the inclusion of electrocardiography the numbers are 88.0% or 5,979. The imaging volumes performed at hospitals are great, but as the number of hospitals decreases, the number of procedures performed at freestanding diagnostic imaging centers increases.

The top five procedures and their volumes are shown below, followed by a chart displaying the weekly average procedures by unit.





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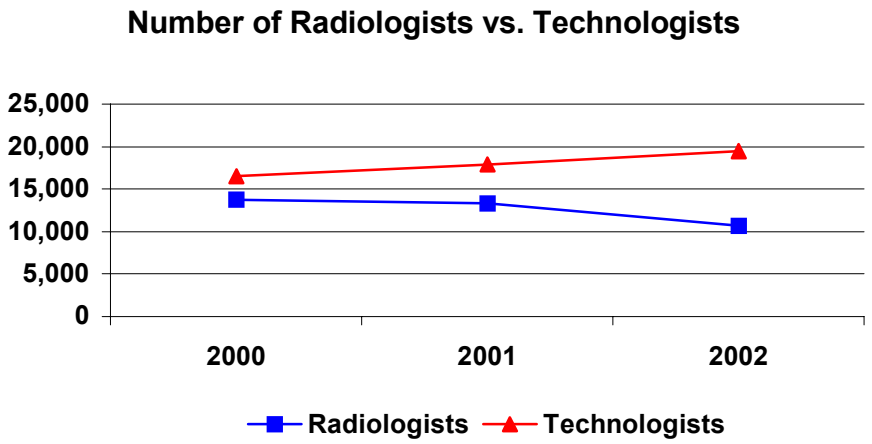
3.4 Imaging Personnel

From November 2001 to November 2002, DICs employed a total of 10,701 radiologists, both full- and part-time, as well as 19,500 full- and part-time technologists. This is an 18.1% increase in the number of technologists employed in DICs, while there is a 22.2% decrease in the number of radiologists at these centers. The raw numbers suggest that technologists, with an increase totaling 2,994, are literally being swapped for the radiologists that declined by 3,061.



Only 97 centers reported that their radiologists and technologists work alongside a total of 399 other specialists within their center. This is a sharp four-year decrease from Verispan's 1999 data which reveal 1,438 other specialists employed in 195 imaging centers. Among the specialties complementing radiology, neurology captures the highest volume of specialists contributing to the services at imaging centers, followed by cardiology.

The American College of Radiology (ACR) provided a 2002 estimate that there are approximately 25,600 post-training diagnostic radiologists practicing in U.S. The trends are still of concern – more early retirements, more workloads below full-time, and more experienced physicians seeking non-clinical work are continuing and probably growing. The concern about being able to hire enough physicians now and in the future is greater than it was in the recent past. If two radiologists go to half time, that's the same as one full retirement. Many young physicians right out of residency are being courted with offers of eight to ten and up to thirteen

weeks of vacation, compared to three weeks and a week of continuing medical education (CME) that's still standard in many specialties. To offer thirteen weeks vacation, you have to hire four radiologists to fill three vacancies. The pay direction for radiologists is also seeing strong inflation in the last three years with salary hikes of 20% to 30% and shorter partnership tracks. Imaging administrators know that with factors such as Medicare's cuts to reimbursements, and malpractice insurance premium increases, there is a limit to what they can offer the radiologists they are recruiting.

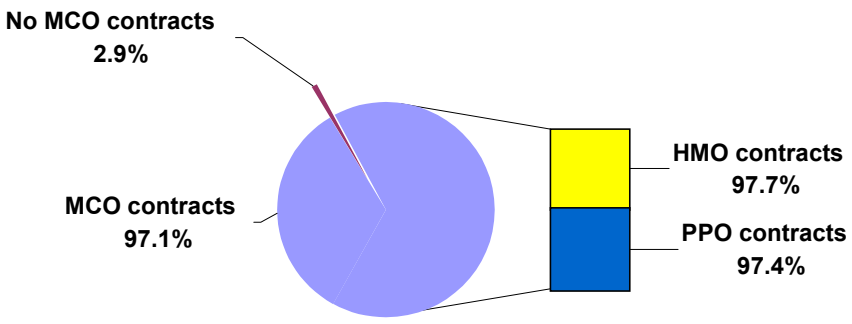
The imaging market is counting on residents to perform procedures on a U.S. population that is consuming the technology at an ever-increasing rate. Add to that the threat of intercontinental consumption and the shortage is of higher regard. Canada is facing its own radiologist shortage and its patients are looking south to meet their imaging needs as was seen in large proportions in the late 1990s. As waiting lists grow, some surgeons may be forced to operate without using diagnostic imaging such as an MRI, adding time and unnecessary risk to the surgical procedure.

4.0 CONTRACTING

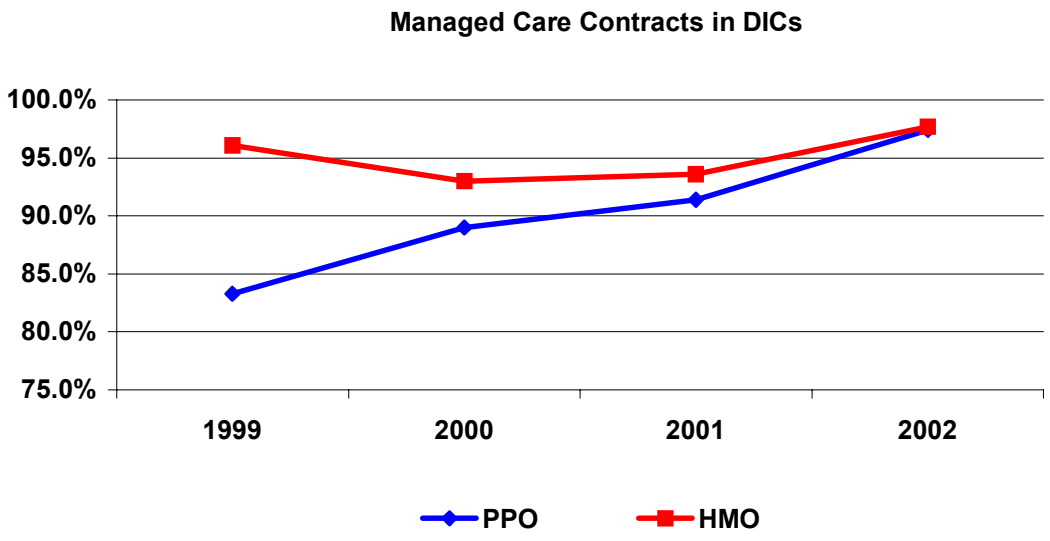
4.1 Managed Care Organizations

DICs are working with managed care organizations to offer sub-specialty expertise, provide 24-hour coverage, expand geographic reach, and collect outcome data. By evaluating factors such as strengths, weaknesses, competition, future goals, and facility costs, DICs are better able to market themselves to managed care organizations. Overall, 97.1% of DICs contracted with managed care organizations in 2002. Of the freestanding DICs that contract with managed care providers, 97.7% contract with at least one health maintenance organization (HMO), and 97.4% contract with at least one preferred provider organization (PPO).

Percent of DICs by Managed Care Contracts



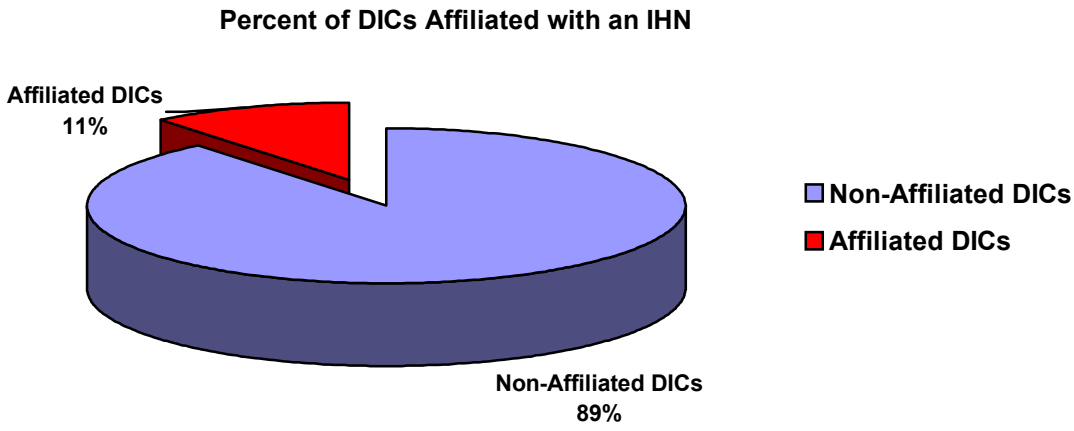
PPOs pose significant competition for HMOs. This is not surprising in a society where full body scan centers largely serving self-pay consumers can be found in most large cities. Consumers are regularly requesting diagnostic tests while bypassing doctor's recommendation. The higher cost of the flexibility that PPOs offer is no longer as inhibiting as it once was.



4.2 Integrated Healthcare Networks

DICs continue to affiliate with integrated healthcare networks (IHNs) to overcome the competitive disadvantages compared to larger associations and other networks. IHNs provide a referral stream to IHNs and add value with care guidelines, events monitoring, results review, electronic medical records, disease-based cost tracking, and outcomes reporting. This value-added infrastructure will influence the decisions regarding the type of imaging equipment to buy as well as will reduce costs and risks.

According to the *Verispan Integrated Healthcare Network Profiling Solution*©, 10.8% of DICs belong to an IHN as of November 2002. The volume of affiliation has increased from 460 to 516 entities now shown on IHN member rosters. This number will continue to grow as IHNs aid DICs to increase productivity, improve revenues and profitability, control costs, enhance care and satisfaction, and optimize overall efficiency.



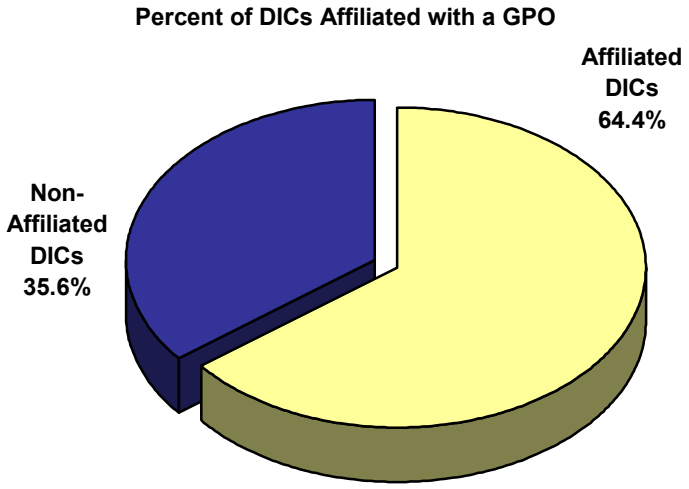
Verispan defines an IHN as *an organization which, through ownership or formal agreements, aligns healthcare facilities in order to deliver integrated healthcare services by improving quality and reducing costs to a defined geographical area. These organizations are formed with the intent to market themselves as one unit to payers.*

4.3 Group Purchasing Organizations

There has been an increase in the number of DICs that have established relationships with group purchasing organizations (GPOs) in 2002. GPOs, a preferred healthcare purchasing channel, offer products and services that make members more cost-effective, profitable, and competitive, while improving the overall quality of each member's facility. Although IHNs are also placing themselves among the preferred purchasing channels for DICs, facilities are still making the connection with GPOs. Among the reasons to expect these relationships to continue are the flexible purchasing contracts able to deliver at either regional or national levels, or even independently for a specific item. GPOs will remain attractive as they decrease administrative fees in response to encroaching competition.

According to the *Verispan Multi-Hospital and Group Purchasing Organization Profiling Solution*©, 64.4% of DICs had purchasing relationships with GPOs as of November 2002. The

increase reflects a growing number of centers, 3,075 as compared to 2,407 in November 2001, that are looking to GPOs as a strategy to increase their bottom line.



Verispan defines a GPO as *an organization that offers its member facilities access to purchasing contracts negotiated directly with manufacturers or access to the purchasing contracts of another GPO for the following supply categories: pharmacy, medical/ surgical, laboratory, dietary, and capital equipment.*

5.0 TRENDS

5.1 Market Events

- The cost of technology is no longer the roadblock that it once was. Radiology groups are banding together to offer their services to medical communities and reading exams delivered from local hospitals to a centralized reading facility. These collaborations are realizing benefits in market share and cost per relative value unit. Wherever these advantages can be shown, recruitment and retention of radiologists is more likely.

- PET scans are now acknowledged to have implications in neurology, cardiology and oncology. According to the *Journal of Nuclear Medicine Supplement*, a PET scan is 89% accurate in diagnosing breast cancer, compared to 67% for conventional imaging techniques. The scan can also detect Alzheimer's disease before symptoms occur. It is more expensive than CT or MRI. One machine is about $3 million, and one dose of the radioactive glucose costs hundreds of dollars. The Food and Drug Administration approved the technology in 1998 and Medicare has covered scans since 2001. The most progressive imaging centers have tapped every available revenue source to find the cash to afford the technology. One center reports funding their PET scanner out of non-administrative health revenues – things like parking and research funding. And how could you blame them when PET provides critical and lifesaving technology and the opportunity to be a center of excellence? And of course it doesn't hurt that PET is so sought after that Canadians have been going across the border and paying up to $4,000 (U.S.) for scans. PET is a major technological advance that keeps revealing new capabilities.

- An article from the *Journal of the National Cancer Institute* on March 20, 2002 raised controversy on the merits of mammography screening. Up until this point, the majority of experts believed, based on several, large, randomized clinical trials, that mammography screening every one to two years starting at age 50 is beneficial in minimizing the chance of breast cancer death. However, the recent JNCI article revealed that two boards of experts, the U.S. Preventive Services Task Force and scientists of the Nordic Cochrane Centre in

Denmark, came to opposite conclusions after reanalyzing data on the eight most distinguished clinical trials conducted over the past thirty-five years.

Not only is the benefit of screening mammography uncertain, it is not adequately reimbursed and in many cases loses money. The government has deemed it important enough to regulate and legislate but not really important enough to reimburse sufficiently. A misdiagnosis or a delay in diagnosis of a few months could cause radiologists to lose millions of dollars in liability. All this fuels a lack of incentive for radiologists to go into mammography screening, threatening to put the whole industry out of business. As a result, physicians and insurers are urging Congress to pass law on tort reform, which would limit liability on malpractice suits.

- Malpractice insurance rates are soaring in many states, forcing doctors to move elsewhere where reforms are in place to keep rates down. These reforms limit the dollar amount to which patients can be compensated for damages. For instance, in California, there is a $250,000 cap for "pain and suffering". Meanwhile, in Mississippi, out-of-hand medical malpractice suits have forced a meeting on tort reform.

- Newer technologies, such as PACS, speech recognition system or pager notification system, have been found to decrease costs and improve turnaround time in many centers that have utilized them. For instance, Johns Hopkins Medical Institution studied the use of the pager notification system and found a decrease in report turnaround time by 12.27 hours. Improvements were observed in 23 of the 29 physicians who participated. This is significant, because although verification of reports is but one element of report turnaround time, it constituted 36% of overall process time at Johns Hopkins Medical Center.

  Small centers are now adopting PACS at greater rates. The issues of cost and scalability, which larger centers could take on more readily, are disappearing. In addition to the need for interpreting more images at a faster rate, the rapid proliferation of multi-slice CT scanners

creates a need for digital storage. The hundreds of images these scanners produce just can't be managed in a film environment.

5.2 Implications for Manufacturers

Although 64.4% of DICs have contracts with GPOs for equipment and supplies, most have additional names on their vendor list. Manufacturers are receiving 62.9% of all DICs' business for equipment, and distributors/retailers are receiving 54.7% of all the supply business. Corporate consolidation has spurred the trend toward bundling imaging products, positively affecting market share for manufacturers. Larger DICs and chains can demand better pricing than small independent facilities. The impetus is on the manufacturer to increase technology for enhanced imaging and throughput. It's difficult for manufacturers to justify selling higher cost machines when visits are shifting to other procedures but not increasing significantly.

Many DICs and manufacturers are forming strategic partnerships. Manufacturers are taking on the role of consultant to the DICs regarding cost-saving methods and efficient use of equipment. As both are facing a market with oversupply of products and services, they are working together to provide the latest technology at the lowest cost with the best healthcare service to the patient. Imaging manufacturers and DICs are working together to differentiate themselves from the competition. Strategies including speeding the adoption of new technology, helping fund studies that validate the utility of new technologies, expanding a modality's applications to a most efficient utilization of the equipment, and providing a total commitment to quality care for the patient.

5.3 Future Projections

- Doctors are now being provided more tools for critical decision-making. More specialists than ever have access to thousands of patient histories, medical literature and best practice guidelines, allowing them to compare their patients' symptoms where relevant. This allows for better decision-making regarding the type of imaging test to order for a given patient. Without the additional information, a physician would order imaging tests based on his or her

experience alone, in evaluating patient's symptoms. At the point that a doctor orders a test for a group of symptoms which are similar to others, he then can see what kind of imaging test led to the best diagnosis for those other patients in the database. This type of streamlining of the diagnostic imaging process does its part to breaks down a barrier to entry. It seems certain that the number of non-radiology specialists adding imaging to the services offered in their practice will continue to increase.

- Patient demand for full-body CT screening is growing. A telephone survey of 450 people conducted in September 2001 by Beth Israel Deaconess Medical Center, Boston, showed that 67% of the respondents know nothing about full-body CT screening. But 82% looked favorably upon the scans after receiving an explanation. Their reasons for being interested included early detection and dealing with a family history of medical problems. Overall, 79% of the respondents were concerned about developing cancer and 60% were worried about having a heart attack; 48% said that insurers and/or physicians are not doing enough to provide this kind of testing. Radiologists are struggling with their response to this competition. It is likely that standardized reporting will be proposed in order to align clinical findings with consistent recommendations that both sides must adhere to. There is little else that radiologists in traditional outpatient settings can do. The growth of full-body CT screening does not look as though it will be stemmed.

- Despite the difficult economy, companies in general are still focused on growth strategies, such as mergers and acquisitions and joint ventures. Consolidation of functions often drives the deal-making process, but growth is usually the main focus, including earnings growth, valuation, and free cash flow. Of course the risks involved should be looked at closely. Culture fit, financial impact, retention of key talent, overpayment for the transaction, and rapid implementation of the business plan can all turn against the expectations of the deal. Effective and efficient integration in the first 12 months is a crucial part of the planning. Integration strategy and planning need to be introduced much sooner in the process.

Solid leadership and retention of key talent are among the top people issues that can predict the success of a merger. Just like other businesses, imaging centers are needing to address key people issues such as effective leadership techniques, retaining key talent and boosting employee morale and engagement to stabilize their organizations during times of rapid change. The centers that understand how to manage their growth strategies, similar to other businesses, will have a better chance of achieving growth rather than missing opportunities.

- With the increasing adoption of PACS and other computer technologies, imaging personnel now must understand both clinical and technology issues. The knowledge required in a filmless imaging center is not offered in traditional residency programs. Digital imaging quality control, PACS administration, ergonomics, image compression, and acceptance testing are not commonly a part of graduate medical education coursework. This will need to change with the times.

- Teaching radiologists and those that commonly present at conferences are even becoming expert in image manipulation software such as Photoshop in order to edit and annotate images. This educational demand could contribute to the reason for early physician retirements and a lack of mentoring by the most experienced radiologists.

6.0 RESEARCH METHODOLOGY

6.1 Sources

Since 1985, Verispan has tracked DICs throughout the United States. Verispan contacts every facility to verify its existence and location and to qualify its operation as a DIC.

To qualify for the *Verispan Diagnostic Imaging Center Profiling Solution*©, a facility must meet the following criteria:

A. DIC services must be the primary business activity, or a significant portion thereof, in the case of multi-specialty clinics.

B. Two types of diagnostic services must be offered, with the exception of MRI, CT, PET, or nuclear medicine, where a singular service is accepted for qualification.

C. The DIC must not be located inside a hospital, unless separate ownership and management exist.

A DIC multi-facility chain must own or manage two or more DICs. These multi-facility chains provide current information about facilities they own or manage. Additional sources include: mail surveys, non-respondent telephone calls, managed care rosters, GPO and IHN lists, state listings, internet sites, press releases, telephone directories, and trade publications.

6.2 Methodology

A lead list of all facilities is developed annually. Upon completion of a working list, Verispan sends a mail survey to all known DICs, then contacts each center to verify any information that is inconsistent with the current database. Facilities not responding to the mail survey are contacted by telephone to complete the survey.

The DIC data is updated annually. All data contained in this report are aggregate and represent a complete census of the DIC industry at the time of publication.

6.3 Limitations of the Data

The information contained in this report was correct at the time of publication. However, since the imaging market continues to evolve, there may have been closings or changes in services between time of data collection and publication. In addition, Verispan acknowledges that there may be some facilities that were not possible to locate and survey. Verispan relies on the

facilities to provide accurate data and if discrepancies arise, every attempt is made to verify the data.

Please direct questions to Verispan's Client Services and Support at 877-Verispan-HELP (877-764-4357).