

FONAR CORP  
Form 10-K  
September 28, 2016

SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

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FORM 10-K

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ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended June 30, 2016

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES AND EXCHANGE ACT OF 1934

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File No. 0-10248

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FONAR CORPORATION  
(Exact name of registrant as specified in its charter)

DELAWARE  
(State of incorporation)

11-2464137  
(IRS Employer Identification Number)

110 Marcus Drive, Melville, New York 11747  
(Address of principal executive offices) (Zip Code)

(631) 694-2929

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Common Stock, par value \$.0001 per share

Securities registered pursuant to Section 12(g) of the Act:

None

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Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes \_\_\_ No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes \_\_\_ No

Yes \_\_\_ No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes  No \_\_\_

Indicate by check mark whether the registrant (1) has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (Section 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No \_\_\_

Indicate by check mark if disclosure of delinquent filers, pursuant to Item 405 of Regulation S-K, §229.405 of this Chapter, is not contained, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this 10-K or any amendment to the Form 10-K. [X]

## FONAR CORPORATION AND SUBSIDIARIES

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definitions of “large accelerated filer”, “accelerated filer” and “smaller reporting company” in Rule 12b-2 of the Exchange Act. (Check one): Large accelerated filer \_\_\_\_\_  
 Accelerated filer  Non-accelerated filer \_\_\_\_\_ Smaller reporting company \_\_\_\_\_

(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes \_\_\_\_\_ No

The aggregate market value of the shares of Common Stock held by non-affiliates as of December 31, 2015 based on the closing price of \$17.26 per share on such date as reported on the NASDAQ System, was approximately \$104 million. The other outstanding classes do not have a readily determinable market value.

As of September 6, 2016, 6,157,766 shares of Common Stock, 146 shares of Class B Common Stock, 382,513 shares of Class C Common Stock and 313,438 shares of Class A Non-voting Preferred Stock of the registrant were outstanding.

## DOCUMENTS INCORPORATED BY REFERENCE

None

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## FONAR CORPORATION AND SUBSIDIARIES

### PART I

#### ITEM 1. BUSINESS

##### GENERAL

Fonar Corporation, sometimes referred to as the "Company" or "Fonar", is a Delaware corporation which was incorporated on July 17, 1978. Our address is 110 Marcus Drive, Melville, New York 11747 and our telephone number is 631-694-2929. Fonar also maintains a website at [www.fonar.com](http://www.fonar.com). Fonar provides copies of its filings with the Securities and Exchange Commission on Forms 10-K, 10-Q and 8-K and amendments to these reports to stockholders on request.

We conduct our business in two segments. Our medical equipment segment is conducted directly through Fonar. Our physician management and diagnostic services segment is conducted through our subsidiary Health Management Company of America ("HMCA"), also called Health Diagnostics Management, LLC. HMCA provides management services, administrative services, billing and collection services, office space, equipment, repair, maintenance service, and clerical and other non-medical personnel to medical providers engaged in diagnostic imaging. In addition to acting as a management company, HMCA owns and operates four diagnostic imaging facilities in Florida, where the corporate practice of medicine is permitted.

We restructured the corporate organization of our physician and diagnostic services management segment of our business effective July 1, 2015. Imperial Management Services, LLC ("Imperial"), a subsidiary which owned the assets used in the business of its parent, Health Management Corporation of America (which is wholly-owned by Fonar), transferred those assets to Health Diagnostics Management, LLC ("HDM"), which is another subsidiary of Health Management Corporation of America. As a result, going forward our physician and diagnostic management business will be conducted entirely through HDM, which is operating under the assumed name Health Management Company of America.

Fonar is engaged in the business of designing, manufacturing, selling and servicing magnetic resonance imaging scanners, also referred to as "MRI" or "MR" scanners, which utilize MRI technology for the detection and diagnosis of human disease, abnormalities, other medical conditions and injuries. Fonar's founders built the first MRI scanner in 1977 and Fonar introduced the first commercial MRI scanner in 1980. Fonar is also the originator of the iron-core non-superconductive and permanent magnet technology.

Fonar's iron frame technology made Fonar the originator of "open" MRI scanners. We introduced the first "open" MRI in 1980. Since that time we have concentrated on further application of our "open" MRI, introducing most recently the Upright® Multi-Position™ MRI scanner (also referred to as the "Upright®" or "Stand-Up®" MRI scanner) and the Fonar 360™ MRI scanner. (The Fonar 360™ MRI is not presently being marketed).

The product we are promoting is our Upright® MRI. Our patented Upright® MRI is unique in the industry in that it allows patients to be scanned in fully weight-bearing conditions, such as standing, sitting or bending in any position that causes adverse symptoms. This means that an abnormality or injury, such as a slipped disk can be visualized where it may not have been seen with the patient lying down. We have introduced the name "Upright®" as an alternative to "Stand-Up®" because of the multiplicity of positions in which the patient may be scanned where the patient is not standing.

See Note 17 to the Consolidated Financial Statements for separate financial information regarding our medical equipment and physician and diagnostic management services segments.

## FONAR CORPORATION AND SUBSIDIARIES

### FORWARD LOOKING STATEMENTS.

Certain statements made in this Annual Report on Form 10-K are "forward-looking statements", within the meaning of the Private Securities Litigation Reform Act of 1995, regarding the plans and objectives of Management for future operations. Such statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. These forward-looking statements are based on current expectations that involve numerous risks and uncertainties. Our plans and objectives are based, in part, on assumptions involving the expansion of business. These assumptions involve judgments with respect to, among other things, future economic, competitive and market conditions and future business decisions, all of which are difficult or impossible to predict accurately and many of which are beyond our control. Although we believe that our assumptions underlying the forward-looking statements are reasonable, any of the assumptions could prove inaccurate and, therefore, there can be no assurance that the forward-looking statements included in this Annual Report will prove to be accurate. In light of the significant uncertainties inherent in our forward-looking statements, the inclusion of such information should not be regarded as a representation by us or any other person that our objectives and plans will be achieved.

### THE UPRIGHT® MRI SCANNER

The Upright® MRI (also known as the "Stand-Up® MRI") is a "whole-body" MRI, meaning it can be used to scan any part of the body. Unlike conventional recumbent MRI scanners, the Upright® MRI permits MRI diagnoses to be made in the weight-bearing state. The Upright® MRI allows patients to be scanned while standing, sitting, bending or lying down. This means that an abnormality or injury, such as a slipped disk, may be scanned under full weight-bearing conditions, which more often than not is the position in which patients experience pain. An adjustable bed allows patients to stand, sit or lie on their backs, sides or stomachs. The Upright® MRI is by design a non-claustrophobic MRI scanner.

HMCA manages a total of 25 MRI scanning facilities, four of which are owned by subsidiaries of HMCA. Eighteen facilities are located in New York and seven are located in Florida. (The four facilities owned by HMCA subsidiaries are in Florida, where the corporate practice of medicine is permitted.) Twenty-four facilities are equipped with Upright® MRI scanners. We believe that the utilization of Fonar Upright® MRI scanning systems, which are produced under the protection of our patents, have been a significant factor in the increased patient volume of the scanning facilities.

### MEDICAL EQUIPMENT SEGMENT

## PRODUCTS

The Fonar Upright® MRI is a weight-bearing whole-body open MRI system which enables positional MRI (pMRI®) applications. Operating at a magnetic field strength of 0.6 Tesla, the scanner is a powerful, diagnostically versatile and cost-effective open MRI that provides a broad range of clinical capabilities and a complete set of imaging protocols. Patients can be scanned standing, bending, sitting, upright at an intermediate angle and in the conventional recumbent position. This multi-positional MRI system accommodates an unrestricted range of motion for flexion, extension, lateral bending, and rotation studies of the cervical (upper) and lumbar (lower) spine. Previously difficult patient scanning positions can be achieved and compared using the system's MRI-compatible, three-dimensional, motorized patient handling system. The system's lift and tilt functions deliver the targeted anatomical region to the center of the magnet. True image orientation is assured, regardless of the rotation angle, via computer read-back of the table's position.

There is considerable evidence that the weight-bearing Upright® MRI provides medical benefits not duplicated by any other MRI scanner because patient positioning plays a critical role in detecting clinically significant pathology.



## FONAR CORPORATION AND SUBSIDIARIES

For instance, the Fonar Upright® technology has demonstrated its key value on patients with the Arnold-Chiari Syndrome, which is believed to affect 200,000 to 500,000 Americans. In this syndrome, brain stem compression and subsequent severe neurological symptoms occur in these patients, when because of weakness in the support tissues within the skull, the brain stem descends and is compressed and entrapped at the base of the skull in the foramen magnum, which is the circular bony opening at the base of the skull where the spinal cord exits the skull. The brain structures “entrapped” in Chiari Syndrome are the lowest lying structures of the brain, the tonsils of the cerebellum. The Chiari Syndrome is therefore alternately named Cerebellar Tonsillar Ectopia (CTE) indicating the displacement (ectopia) of these Cerebellar tonsils in this syndrome. Classic symptoms of the Chiari Syndrome include the “drop attack,” where the patient unexpectedly experiences an explosive rush or nervous discharge at the base of the brain which rushes down the body to the extremities, causing the patient to collapse in a temporary neuromuscular paralysis; this subsides when the patient is lying down. Conventional lie-down MRI scanners cannot make an adequate evaluation of the pathology since the patient’s pathology is most visible and the symptoms most acute when the patient is scanned in the upright weight-bearing position.

A publication in the Journal “Brain Injury” (Brain Injury 2010, 24 (7-8) 988-994) of 1,200 neck pain patients reported that the fallen cerebellar tonsils of the brain (CTE) were missed 75% of the time when the patient was scanned only in the recumbent position. It is critical to have an image of the patient in an upright position so that the neurosurgeons can fully evaluate the extent of the brain stem and choose the most appropriate surgical approach for the operative repair.

The study was published by 10 authors from distinguished universities in the United States and around the world. The study reported that Cerebellar Tonsillar Ectopia Herniation (CTE) was missed 75% of the time when the patient was scanned lying down instead of upright. At the current rate of 1,000,000 automobile whiplash injuries in the U.S. per year, 600,000 patients each year would have the pathology responsible for their symptoms go undetected if they were examined solely in a conventional recumbent-only MRI.

The Upright® MRI has also demonstrated its value for patients suffering from scoliosis. Scoliosis patients have been typically subjected to routine x-ray exams for years and must be imaged upright for an adequate evaluation of their scoliosis. Because the patient must be standing for the exam, an x-ray machine has been the only modality that could provide that service. The Upright® MRI is the only MRI scanner that allows the patient to stand during the MRI exam. Fonar has developed a new RF receiver and scanning protocol that for the first time allows scoliosis patients to obtain diagnostic pictures of their spines without the risks of x-rays. A study by the National Cancer Institute (2000) of 5,466 women with scoliosis reported a 70% increase in breast cancer resulting from 24.7 chest x-rays these patients received on the average in the course of their scoliosis treatment.

Other important new applications are Upright® imaging of the pelvic floor and abdomen to image prolapses and inguinal hernias. Fonar has also developed the first non-invasive method to image the prostate: the patient simply sits

on a flat, seat-like coil.

The Upright® MRI is also the world's most non-claustrophobic whole-body MRI scanner. Patients can simply walk into the magnet, stand or sit for their scans and then walk out. Any site with a Fonar Upright® MRI scanner is capable of providing Open Sky® MRI scanning services. The magnet's front-open and top-open design provides an unprecedented degree of comfort because there is nothing in front of the patient's face except for a large (42") flat-screen TV that is mounted on the wall. The default position for the bed is a tilt back of seven degrees that minimizes patient motion. Special coil fixtures, a patient seat, Velcro straps, and transpolar stabilizing bars are also used to keep the patient comfortable and motionless throughout the scanning process.

Full-range-of-motion studies of the joints in a multiple of directions are possible, an especially promising feature for sports injuries. Full Range of Motion cines, or movies, of the lumbar spine can also be achieved under full body weight.

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## FONAR CORPORATION AND SUBSIDIARIES

The Upright® MRI is designed to maximize image quality through an optimal combination of signal-to-noise (S/N) and contrast-to-noise (C/N) ratios. The technical improvements realized in this scanner's design over its lower field strength predecessors also include increased image-processing speed and diagnostic flexibility.

Fonar created the high-field open MRI market segment. High-field open MRIs operate at significantly higher magnetic field strengths than the 0.2-0.35 Tesla open MRIs that preceded them, and, therefore, benefit from more of the MRI image-producing signal needed to make high-quality MRI images.

Fonar maximizes image quality through an optimal combination of image signal to noise (S/N) and contrast-to noise (C/N) ratios. Technical improvements incorporated into the scanner design include increased image processing speed, high-S/N Organ Specific(TM) RF receiver coils, high performance front-end electronics featuring high-speed, wide-dynamic-range analog-to-digital conversion and a miniaturized ultra-low-noise pre-amplifier; high-speed automatic tuning, bandwidth-optimized pulse sequences, multi-bandwidth sequences, and off-center FOV imaging capability.

In addition to the signal-to-noise ratio, however, a major determinant of image quality that must be considered is contrast, the quality that enables reading physicians to clearly distinguish adjacent, and sometimes minute, anatomical structures from their surroundings. This quality is measured by contrast-to-noise ratios (C/N). Unlike S/N, which increases with increasing field strength, relaxometry studies have shown that C/N peaks in the mid-field range and actually falls off precipitously at higher field strengths. The Upright® MRI scanners operate squarely in the optimum C/N range.

FONAR's scanners provide various features allowing for versatile diagnostic capability. For example, SMART™ scanning allows for same-scan customization of up to 63 slices, each slice with its own thickness, resolution, angle and position. This is an important feature for scanning parts of the body that include small-structure sub-regions requiring finer slice parameters. There is also Multi-Angle Oblique™ (MAO) imaging, and oblique imaging.

During fiscal 2016, sales of our Upright® MRI scanners accounted for approximately 1.1% of our total revenues and 7.7% of our medical equipment revenues, as compared to 2.3% of total revenues and 14.1% of medical equipment revenues in fiscal 2015, and as compared to 1.4% of our total revenues and 7.9% of medical equipment revenues in fiscal 2014. These results reflect the volatility in our sales of scanners.

FONAR's principal selling, marketing and advertising efforts have been focused on the Upright® MRI, which we believe is a particularly unique product, being the only MRI scanner which is both open and allows for weight-bearing imaging. We expect to continue our focus on the Upright® MRI in the immediate future.

The materials and components used in the manufacture of our products (circuit boards, computer hardware components, electrical components, steel and plastic) are generally available at competitive prices. We have not had difficulty acquiring such materials.

## PRODUCT MARKETING

The principal markets for the Company's scanners are private diagnostic imaging centers and hospitals.

We use internal and independent manufacturer's representatives for domestic and foreign markets. None of Fonar's competitors are entitled to make the Fonar Upright® MRI scanner.

Fonar's Website includes interactive product information for reaching customers.

Fonar has targeted orthopedic surgeons and neurosurgeons, particularly spine surgeons, as important markets for the Upright® MRI. Accordingly, Fonar has exhibited at annual meetings of The American Academy of Orthopaedic Surgeons (AAOS); the North American Spine Society (NASS); the American Association of Neurological Surgeons (AANS); and the Congress of Neurological Surgeons (CNS).

## FONAR CORPORATION AND SUBSIDIARIES

During fiscal 2016, sales were made to customers in the [United Arab Emirates, Switzerland, Canada and to Medserena in Germany.] CEO Matthias Schulz of Medserena, Fonar's principal foreign sales representative and distributor, has said, "The large number of requests coming from our physicians in Germany are arising because of the special medical need for FONAR's unique technology. This is in spite of an intensely active MRI market in Germany, where there are already many conventional lie-down MRIs installed." [Medserena also has expanded its market to the United Kingdom with the opening of a Fonar Upright® MRI scanner in London.]

Fonar's marketing strategy has been designed to reach key purchasing decision makers with information concerning the Upright® MRI. This has led to many inquiries and to some sales of the Upright® MRI scanner and is intended to increase Fonar's presence in the medical market. Fonar focuses on four target audiences: neurosurgeons, orthopaedic surgeons, radiologists and physicians in general.

- 1) Neurosurgeons and Orthopaedic Surgeons: These are the surgeons who can most benefit from the superior diagnostic benefits of the Fonar Upright® MRI with its Multi-Position® diagnostic ability.
- 2) Radiologists: These physicians can now offer a new modality to their referring physicians.
- 3) All Physicians: The vast number of doctors who send patients for MRI's need to be aware of the diagnostic advantages of the Fonar Upright® Multi-Position® MRI.

Our advertising for Fonar and HMCA re-enforces the unique value provided by Fonar MRI scanners. We have increased internet awareness of our product by driving patient traffic to the Upright® scanning centers we manage via the Fonar website ([www.fonar.com](http://www.fonar.com)) as well as by creating Websites for every location. These websites give prospective customers of Upright® MRI scanners a view of operating Upright® MRI centers and highlight the benefits of using an Upright® MRI scanner. The success of HMCA-managed sites not only increases management fees to HMCA but encourages new sales for Fonar as well.

To meet the demand for high-field open MRI scanners, Fonar plans to devote its principal efforts to marketing the Upright® MRI. The Upright® MRI is the only scanner in the industry that has the unique capability of scanning patients under weight-bearing conditions and in various positions. Utilizing a 6000 gauss (0.6 Tesla field strength) iron core electromagnet, the Upright® MRI scanner magnets are among the highest field "Open MRI" scanners in the industry.

We are seeking to promote foreign sales and have sold scanners in various foreign countries. Foreign sales, however, have not yet proved to be a significant source of revenue.

During the fiscal year ended June 30, 2016, 1.1% of the Company's revenues were generated by foreign sales, as compared to 3.0% for fiscal 2015.

#### SERVICE AND UPGRADES FOR MRI SCANNERS

Our customer base of installed scanners has been and will continue to be an additional source of income, independent of direct sales.

Income is generated from the installed base in two principal areas, namely, service and upgrades. Service and maintenance revenues from our external installed base were approximately \$9.5 million in fiscal 2016 and \$9.7 million in fiscal 2015. Notwithstanding the decrease in service revenues in fiscal 2016, our objective is to maintain service revenues at present levels or better, based on the longevity of the technology and refurbishments and upgrades which keep the scanners competitive with the latest techniques.

We also anticipate that our scanners will result in upgrades income in future fiscal years. The potential for upgrades income, originates in the versatility and productivity of the Upright® Imaging technology. New medical uses for MRI technology are constantly being discovered and are anticipated for the Upright® Imaging technology as well. New features can often be added to the scanner by the implementation of little more than versatile new software packages, which when coupled with hardware upgrades can add years of useful life to the scanner.

## FONAR CORPORATION AND SUBSIDIARIES

### RESEARCH AND DEVELOPMENT

During the fiscal year ended June 30, 2016, we incurred expenditures of \$1,631,846, none of which were capitalized, on research and development, as compared to \$1,812,398, none of which were capitalized, during the fiscal year ended June 30, 2015.

Research and development activities have focused principally on software improvements to the user interface of the MRI scanner. The Windows-based Sympulse™ platform controls all of the functions of the UPRIGHT® scanner except those of the versatile, multi-position patient table. Separate, dedicated, motion-control software is used to maneuver the UPRIGHT® bed, and development of this software is ongoing as well.

While software improvements to the user interface are important in their own right, significant value is added to the MRI scanner by the modification of existing protocols for examining various parts of the body, and the development of new protocols that utilize new underlying capabilities of the pulse sequence software. Over time, FONAR users have become accustomed to the steady improvement in the recommended clinical protocols that accompany new software releases. More significantly, in recent years we have seen increasing adoption of FONAR-recommended clinical protocols over those developed on site. This is a testament to the superior image quality they produce in attractively short scan times.

The development of clinically practical scan protocols and software depends on close contact between research and development scientists and engineers, and end users. That close contact is facilitated in part by the relationship with HMCA and the scanning centers. In addition to that collaboration, R&D staff have pursued a variety of novel and Upright® MRI-specific research projects. It is anticipated that these will ultimately lead to new applications that are made available to existing customers as upgrade add-ons to their machines. For example, phase-contrast imaging techniques originally developed for angiography have recently been applied to cerebro-spinal fluid (CSF) flow. Analysis of CSF flow in upright and recumbent postures may prove to be of significant value in the evaluation of a variety of disorders.

### BACKLOG

Our backlog of unfilled orders at September 9, 2016 was approximately \$1.7 million, as compared to \$2.5 million at September 10, 2015. It is expected that the existing backlog of orders will be filled within the 2017 fiscal year.

## PATENTS AND LICENSES

We currently have numerous patents in effect which relate to the technology and components of our MRI scanners. We believe that these patents, and the know-how we have developed, are material to our business.

One of our patents, issued in the name of Dr. Damadian and licensed to Fonar, was United States patent No. 3,789,832, Apparatus and Method for Detecting Cancer in Tissue, also referred to in this report as the "1974 Patent". The 1974 Patent was the first MRI patent issued by the United States Patent Office. The development of our MRI scanners has been based upon the 1974 Patent, and we believe that the 1974 Patent was the first of its kind to utilize MR to scan the human body and to detect cancer. The 1974 Patent was extended beyond its original 17-year term and expired in February, 1992.

We have significantly enhanced our patent position within the industry and now possesses a substantial patent portfolio which provides us, under the aegis of United States patent law, "the exclusive right to make, use and sell" many of the scanner features which Fonar pioneered and which are now incorporated in most MRI scanners sold by the industry. As of June 30, 2016, 195 patents had been issued to Fonar, and approximately 21 patents were pending. A number of Fonar's existing patents specifically relate to protecting Fonar's position in the Upright MRI market. The patents further enhance Dr. Damadian's pioneer patent, the 1974 Patent, that initiated the MRI industry and provided the original invention of MRI scanning. The terms of the patents in Fonar's portfolio extend to various times.



## FONAR CORPORATION AND SUBSIDIARIES

We also have patent cross-licensing agreements with other MRI manufacturers. We have not licensed, however, any technology relating to Upright® MRI scanning.

## PRODUCT COMPETITION

### MRI SCANNERS

MRI takes advantage of the nuclear magnetic resonance signal elicited from the body's tissues and the exceptional sensitivity of this signal for detecting disease discovered by Fonar. Much of the serious disease of the body occurs in the soft tissue of vital organs. The maximum contrast available by x-ray with which to discriminate disease is 4%. Brain cancers differ from surrounding healthy brain by only 1.6% while the contrast in the brain by MRI is 25 times greater at 40%. X-ray contrasts among the body's soft tissues are maximally 4%. Their contrast by MRI is 32.5 times greater (130%).

The soft tissue contrasts with which to distinguish cancers on images by MRI are up to 180%. In the case of cancer these contrasts can be even more marked making cancers readily visible and detectable anywhere in the body. This is because the nuclear resonance signals from the body's normal soft tissue vital organs, as discovered in the original publication that founded MRI, differ so dramatically from each other (e.g. small intestine 257 milliseconds, brain 595 milliseconds). Liver cancer and healthy liver signals differ by 180% for example.

A majority of the MRI scanners in use in hospitals and outpatient facilities and at mobile sites in the United States are based on high field (1.5 - 3.0 Tesla) air core superconducting magnet technology.

The remainder, described as Open MRIs, are recumbent-only machines based on Fonar's original iron-frame vertical magnetic field magnet design. These systems have been manufactured and sold by many of our largest competitors over the years. They generally operate at low field strengths (0.2 - 0.35 Tesla). Recently our competitors have attempted to introduce higher field strength Open MRI products (0.5 – 1.0 Tesla), but the perception of the medical community is still that Open MRIs are useful only for anxious and claustrophobic patients, and that the Open MRIs' image quality is poor, and scan times long.

One of the Upright MRI's big competitive advantages is that it is dramatically different from the Open MRI in several important ways:

The Upright MRI does something clinically valuable that the high-field MRI machines cannot do (i.e. positional imaging, weight-bearing imaging).

Although the patient can extend his arms and possibly see out the sides while recumbent in an Open MRI, there is still a large intimidating magnet pole very close to and directly in front of the patient's face. The Upright MRI allows the patient to look directly out of the scanner and watch a 42 inch TV.

The Upright MRI uses the same configuration RF receiver coil as a high-field MRI system to image the spine. Open MRIs cannot do this. (This is because of the rule in MRI that the axis of symmetry of the RF receiver coil should be perpendicular to the direction of the main magnetic field. The upright