CHAPTER ONE: Executive Summary

- Image Enhancament Overview
- X-Ray and CT
- Ultrasound
- MRI
- Radiopharmaceuticals
- World Market Summary
- Volume Growth
- New Diagnostics
- Toxicity Issues
- Generic Competition
- World Market Growth Analysis
- Methodology

CHAPTER TWO: Introduction

- Agents for the Early Detection of Disease
- Two Functions
- Adding Value
- Key Clinical Markets
- X-Ray and CT
- Ultrasound
- Updated Warning on Microbubbles
- Microbubble Composition
- Targeted and Untargeted
- MRI
- Novel Agents
- Nuclear Medicine
- Diagnosing Functionality
- Sourcing Issues Updated
- PET
- New Applications
- SPECT
- Gamma Cameras
- Risks
- Ionic and Non-Ionic Contrast
- Issues
- Utilization Rate
- Technical Challenges
- Tracking Contrast Media
- Contrast Modality Combinations
- Emerging Applications
- Atherosclerosis
- Nanotechnology

CHAPTER THREE: Market Developments

- Market Developments
- FDA Approves Amyvid
- Bayer HealthCare Business Integration
- Bayer Receives Gadavist Approval
- Agfa's Generic Push
- Agfa's Generic Push
- Improving Magnetic Resonance Visualization
- Nanoparticle Contrast
- Tracking Stem Cells

CHAPTER FOUR: Markets

- Market Drivers
- Withstanding the Recession
- Combination Imaging and Disease Management
- Opportunities from Increasing Specificity
- Aging Population
- Utilization
- Procedures
- Outlook for Contrast Media
- Market Forecast
- X-Ray and CT
- Ultrasound
- MRI
- Outlook for Molecular Imaging Agents
- Market Forecast

CHAPTER FIVE: Corporate Profiles

- Acusphere Inc..
- Alseres Pharmaceuticals, Inc.
- Amag Pharmaceuticals Inc
- Aposense Ltd
- ART Advanced Research Technologies Inc.
- Avid Radiopharmaceuticals Inc
- Bayer HealthCare
- Bracco SpA
- Cardinal Health
- Cell>Point
- Covidien plc
- Daiichi Pharmaceutucal Co. Ltd
- Draximage
- Endocyte Inc
- Eusa Pharma

- FluoroPharma Medical Inc
- GE Healthcare
- Guerbet Group
- Hovione Farmaciencia SA
- Immunomedics Inc
- Insight Agents
- Kereos Inc
- King Pharmaceuticals
- Lantheus Medical Imaging
- Luna Nanoworks
- Macrocyclics
- MDS Nordion
- Molecular Insight Pharmaceuticals, Inc
- Nanoscan Imaginf LLC
- Palatin Technologies Inc
- Pharmacyclics
- Spago Imaging AB
- Targeson Inc
- Taejoon Pharmaceutical Co. Ltd
- VisEn Medical
- Zim Laboratories India Ltd

List of Exhibits

CHAPTER ONE: Executive Summary

- Executive SummaryExhibit 1:World Market for X-Ray Medical Contrast Media, 2011-2015
- Exhibit 2:World Market for CT Medical Contrast Media, 2011-2015
- Exhibit 3:World Market for Ultrasound Medical Contrast Media, 2011-2015
- Exhibit 4: World Market for MRI Medical Contrast Media, 2011-2015
- Exhibit 5:World Market for PET Radiopharmaceuticals, 2011-2015
- Exhibit 6:World Market for SPECT Radiopharmaceuticals, 2011-2015

CHAPTER TWO: Introduction

- Exhibit 7:Key Medical Contrast Agents by Type
- Exhibit 8:Advantages of Non-Ionic Contrast Media
- Markets Exhibit 9:Patent Status of Selected Medical Imaging Agents

CHAPTER FOUR: MARKETS

- Exhibit 10:World Market for Medical Contrast Media and Radiopharmaceuticals, 2011-2015
- Exhibit 11:World Market Share for Medical Contrast Media and Radiopharmaceuticals, 2011

- Exhibit 12:World Market for Medical Contrast Media and Radiopharmaceuticals, 2015
- Exhibit 13:Key Players' Percentage Share Worldwide Medical Contrast Media Market, 2012
- Exhibit 14:World Market Geographic Segmentation for Medical X-Ray Procedures, 2012
- Exhibit 15:World Market Geographic Segmentation for Medical X-Ray Procedures, 2012
- Exhibit 16:Worldwide Medical MRI Procedures, 2012
- Exhibit 17:World Market Geographic Segmentation for Medical MRI Procedures, 2012
- Exhibit 18:Worldwide Medical CT Procedures, 2012
- Exhibit 19:World Market Geographic Segmentation for Medical CT Procedures, 2012
- Exhibit 20:Worldwide Medical Ultrasound Procedures, 2012
- Exhibit 21:World Market Geographic Segmentation for Medical Ultrasound Procedures, 2012
- Exhibit 22:Worldwide Medical PET Procedures, 2012
- Exhibit 23:World Market Geographic Segmentation for Medical PET Procedures, 2012
- Exhibit 24:Worldwide Medical SPECT Procedures, 2012
- Exhibit 25:World Market Geographic Segmentation for Medical SPECT Procedures, 2012
- Exhibit 26:Status of Selected Medical Imaging Agents
- Exhibit 27:World Markets for X-Ray Contrast Media, 2011-2015
- Exhibit 28:World Market for Medical X-Ray Contrast Media by Geographic Segment, 2011-2015
- Exhibit 29:World Market for Medical X-Ray Contrast Media by Geographic Segment, 2012
- Exhibit 30:World Market for CT Contrast Media, 2011-2015
- Exhibit 31:World Market for Medical CT Contrast Media by Geographic Segment, 2011-2015
- Exhibit 32:World Market for Medical CT Contrast Media by Geographic Segment, 2012
- Exhibit 33:World Market for Ultrasound Contrast Media, 2011-2015
- Exhibit 34:World Market for Medical Ultrasound Contrast Media by Geographic Segment, 2011-2015
- Exhibit 35:World Market for Medical Ultrasound Contrast Media by Geographic Segment, 2012
- Exhibit 36:World Market for MRI Contrast Media by Geographic Segment, 2011-2015
- Exhibit 37:World Market for Medical MRI Contrast Media by Geographic Segment, 2011-2015
- Exhibit 38:World Market for Medical MRI Contrast Media by Geographic Segment, 2012
- Exhibit 39:Selected Molecular Imaging Products
- Exhibit 40:World Market for Medical PET Radiopharmaceuticals, 2011-2015
- Exhibit 41:World Market for Medical PET Radiopharmaceuticals by Geographic Segment, 2011-2015
- Exhibit 42 :World Market for Medical PET Radiopharmaceuticals by Geographic Segment, 2012
- Exhibit 43:World Market for Medical SPECT Radiopharmaceuticals, 2011-2015
- Exhibit 44:World Market for Medical SPECT Radiopharmaceuticals by Geographic Segment, 2011-2015

• Exhibit 45:World Market for Medical SPECT Radiopharmaceuticals by Geographic Segment, 2012

1.0 EXECUTIVE SUMMARY

1.1 Molecular Basis of Cell Function

1.1.1 Personalized Medicine

1.2 Driving Health Care

1.3 Multicapabilities

1.4 The Power of Imaging

1.4.1 Key Modalities

1.5 World Market Summary

1.5.1 Market Drivers and Challenges

1.5.2 Growth Analysis

1.6 Methodology

2.0 INTRODUCTION

2.1 Definition

2.1.1 Visualizing Biological Events

2.1.2 For Diagnosis and More

2.1.3 Molecular Agents

2.2 New Direction for Medicine

2.3 Modalities and Applications

2.3.1 Nuclear Medicine

2.3.1.1 PET

2.3.1.1.1 Understanding Disease Mechanisms

2.3.1.2 SPECT and Gamma Cameras

2.3.3 MRI

2.3.4 Ultrasound

2.3.5 Fusion Imaging

2.3.5.1 Dual-Modality Advantages

2.3.5.2 PET/CT

2.3.5.3 SPECT/CT

2.3.5.4 PET/MRI

2.3.5.4.1 Therapeutic Successes

2.3.6 Optical Imaging

2.4 Drivers

2.4.1 Complementary Opportunities

2.4.2 Preventive Medicine

2.5 Issues and Challenges

2.5.1 Dual modality Issues

2.5.2 Standardization Needed

2.5.3 Addressing Radiopharmaceutical Shortages

2.5.4 Signaling Improvements, Equipment Configurations Needed

2.5.5 Advances in Devices and Software

2.6 Health Care Reform

2.6.1 Utilization Rate

2.6.2 Tax Concerns

3.0 RESEARCH IMPACTING THE MARKET

3.1 Diagnosing Fever of Unknown Origin

3.2 Determine Malignancy in Potential Ovarian Cancer

3.3 PET/CT Impacts Brain Tumor Management

3.4 Improving Care for Neuroendocrine Cancer

3.5 PET Optimizes Virtual Colonoscopy

3.6 Staging Prostate Cancer

3.7 Cyclotron Expansion

3.8 Breast Cancer Screening

3.9 PET Indicates Therapy Effectiveness

3.10 Lower Dosage in Hybrid Imaging

3.11 Analyze Differences in Biochemical Status of Tissues

3.12 Myocardial Flow Reserve Analysis

4.0 MARKETS

4.1 Overview

4.1.1 Growth In Cardiology

4.1.2 Merging Diagnosis and Treatment

4.2 Procedures

4.3 Forecasts

4.3.1 PET

4.3.1.1 PET/CT

4.3.1.1.1 Time of Flight Impact

4.3.2 SPECT-Gamma Camera Systems

4.3.2.1 SPECT/CT

4.3.2.1.1 Driven by Cardiology

4.3.3 MRI

4.3.4 CT

4.3.5 Ultrasound

5.0 CORPORATE PROFILES

5.1 ABT Molecular Imaging Inc.

5.2 Advanced Cyclotron Systems Inc.

5.3 Aspect Imaging

5.4 Avid Radiopharmaceuticals Inc.

5.5 Bioscan

5.6 Cardinal Health

5.7 Digirad Corp.

5.8 Dilon Diagnostics

5.9 Gamma Medica Inc.

5.10 GE Healthcare

5.11 Imaging Diagnostic Systems Inc.

5.12 MIR Preclinical Services

5.13 OptoSonics Inc.

5.14 Philips Healthcare

5.15 Photo Diagnostic Systems

5.16 Positron Corp.

5.17 Shimadzu Corp.

5.18 Siemens Healthcare

5.19 Spectrum Dynamics Ltd.

5.20 Toshiba America Medical Systems

5.21 UltraSPECT Ltd.

5.22 VisEn Medical

5.23 Zecotek Photonics Inc. Unit 1120

LIST OF EXHIBITS

1.0 EXECUTIVE SUMMARY

Exhibit 1: World Market for PET, 2011-2015 Exhibit 2: World Market for SPECT, 2011-2015 Exhibit 3: World Market for Molecular CT, 2011-2015 Exhibit 4: World Market for Molecular MRI, 2011-2015 Exhibit 5: World Market for Molecular Ultrasound, 2011-2015 Exhibit 6: World Market for PET/CT, 2011-2015 Exhibit 7: World Market for SPECT/CT, 2011-2015

2.0 INTRODUCTION

Exhibit 8: Key Radionuclides

4.0 MARKETS

Exhibit 9: Worldwide SPECT Procedures, 2012 (Cardio., Cancer, Neuro.) Exhibit 10: US SPECT Procedures, 2012 (Cardio., Cancer, Neuro.) Exhibit 11: Worldwide PET Procedures, 2012 (Cardio., Cancer, Neuro.) Exhibit 12: US PET Procedures, 2012 (Cardio., Cancer, Neuro.) Exhibit 13: Worldwide Molecular CT Procedures, 2012 (US, EU, ROW) Exhibit 14: Worldwide Molecular MRI Procedures, 2012 (US, EU, ROW) Exhibit 15: World Medical Market for PET Systems, 2011-2015 Exhibit 16: World Medical Market for PET Systems by Geographic Segment, 2011-2015 (U.S., Europe, BRIC, Japan, ROW) Exhibit 17: World Medical Market for PET/CT Systems, 2011-2015 Exhibit 18: World Medical Market for PET/CT Systems by Geographic Segment, 2011-2015 (U.S., Europe, BRIC, Japan, ROW) Exhibit 19: World Medical Market for PET Systems by Geographic Segment, 2012 Exhibit 20: Worldwide Medical PET Installed Base, 2012 (U.S., World) Exhibit 21: World Medical Market for SPECT Systems, 2011-2015 Exhibit 22: World Medical Market for SPECT Systems by Geographic Segment, 2011-2015 (U.S., Europe, BRIC, Japan, ROW) Exhibit 23: World Medical Market for SPECT/CT Systems, 2011-2015 Exhibit 24: World Medical Market for SPECT/CT Systems by Geographic Segment, 2011-2015 (U.S., Europe, BRIC, Japan, ROW) Exhibit 25: World Medical Market for SPECT Systems by Geographic Segment, 2012 Exhibit 26: Worldwide Medical SPECT Installed Base, 2012 Exhibit 27: World Medical Market for MRI Molecular Imaging Systems, 2011-2015 Exhibit 28: World Medical Market for MRI Molecular Imaging Systems by Geographic Segment, 2011-2015 (U.S., Europe, BRIC, Japan, ROW) Exhibit 29: World Medical Market for MRI Molecular Imaging Systems by Geographic Segment 2012 Exhibit 30: World Medical Market for CT Molecular Imaging Systems 2011-2015 Exhibit 31: World Medical Market for CT Molecular Imaging Systems by Geographic Segment, 2011-2015 (U.S., Europe, BRIC, Japan, ROW)

Exhibit 32: World Medical Market for CT Molecular Imaging Systems by Geographic Segment, 2012

Exhibit 33: World Medical Market for Ultrasound Molecular Imaging Systems, 2011-2015

Exhibit 34: World Medical Market for Ultrasound Molecular Imaging Systems by Geographic Segment, 2011-2015

Exhibit 35: World Medical Market for Ultrasound Molecular Imaging Systems by Geographic Segment, 2012