An Emerging Leader in Targeted Internal Radiation Therapy

January 2021

Investor Presentation

NYSE American: ISR
Safe Harbor Statement

Statements in this presentation about Isoray’s future expectations, including: the anticipated continued growth in revenues in fiscal year 2021, the impact of COVID-19 on our financial results and the timing of recovery in our brachytherapy procedures, if any, suppliers, scheduling of procedures, and employees, advantages of our products including Blu Build and the GammaTile Therapy delivery system, whether interest in and use of our Cesium-131, commercially known as Cesium Blu, products will increase or continue, whether use of Cesium-131 in non-prostate applications will continue to increase revenue, whether further manufacturing and production process improvements will be completed or will result in lower costs, whether our market presence and growth will continue, and all other statements in this presentation, other than historical facts, are “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995 (“PSLRA”). This statement is included for the express purpose of availing Isoray, Inc. of the protections of the safe harbor provisions of the PSLRA. It is important to note that actual results and ultimate corporate actions could differ materially from those in such forward-looking statements based on such factors as physician acceptance, training and use of our products, market acceptance and recognition of our products, our ability to successfully manufacture, market, and sell our Blu Build products and the success of the GammaTile Therapy, the length and severity of the COVID-19 pandemic, our ability to manufacture our products in sufficient quantities to meet demand within required delivery time periods while meeting our quality control standards, our ability to enforce our intellectual property rights, whether additional studies are released that support the conclusions of past studies, whether ongoing patient results with our products are favorable and in line with the conclusions of clinical studies and initial patient results, patient results achieved when our products are used for the treatment of cancers and malignant diseases, successful completion of future research and development activities, whether we, our distributors and our customers will successfully obtain and maintain all required regulatory approvals and licenses to market, sell and use our products in its various forms, continued compliance with ISO standards, the success of our sales and marketing efforts, changes in reimbursement rates, the procedures and regulatory requirements mandated by the FDA for 510(k) approval and reimbursement codes, changes in laws and regulations applicable to our products, the scheduling of physicians who either delay or do not schedule patients in periods anticipated, the use of competitors’ products in lieu of our products, less favorable reimbursement rates than anticipated for each of our products, and other risks detailed from time to time in Isoray’s reports filed with the SEC. Unless required to do so by law, we undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

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Investment Highlights

- **Emerging leader in radiotherapeutics focused on commercializing proprietary Cesium-131 therapy for the treatment of cancer**

- **Growing body of evidence suggests that Cesium-131 can be used as a superior therapy option compared to alternatives**
  - Shorter half-life and stronger energy levels lead to better patient outcomes

- **Consistent revenue growth and improving gross margin trends in core markets:**
  - TTM Revenue of $9.75M increased 21%*
  - TTM Gross Profit Growth of 37%*
  - TTM Gross Margin of 52.7%*

- **Robust clinical pipeline targeting additional market opportunity**
  - Recently initiated immunotherapy study with Cesium-131 in combination with Pembrolizumab (Keytruda®) for the treatment of recurrent head and neck cancer
  - Evaluating Cesium-131 for treatment of surgical cancers, including GYN, lung and others

- **Experienced management team with deep industry expertise**

* 10/1/2019 – 9/30/2020
Brachytherapy Overview

Safe and established treatment option for the treatment of cancer

Brachytherapy is a cancer treatment utilizing radioactive seeds placed directly inside the tumor or at the surgical margin, allowing for highly targeted treatment.

Benefits

- Out-patient single visit treatment
  - Use less PPE and staff
  - Less potential exposure to COVID-19
- Low-cost effective treatment
- Highly targeted and personalized treatment dose
- Uniform and predictable radiation dose
  - Mitigates damage to healthy tissue vs. external beam
Isoray’s Cesium-131 therapy is proven to be a highly effective cancer treatment:

- Marketed under the Cesium Blu® brand name
- Higher energy and a shorter half-life than competitors
- Treatment delivered faster than external radiation (90% in 33 days)
- Powerful, continuous, therapeutic energy

- 15,000+ patients treated over 10 years

### Cesium-131
Introduced in 2004

- **9.7 Day Half Life**
  The amount of time for the radiation to half. A shorter half life means quicker to PSA baseline. (8, 12, 13)

- **30.4 Kev**
  The energy level of the isotope. Higher energy leads to greater coverage of the infected organ.

- **33 Days for 90% Dose**
  Faster dose delivery rate.

- Detectable in the body for only 97 Days

<table>
<thead>
<tr>
<th>Palladium-103</th>
<th>Iodine-125</th>
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</thead>
<tbody>
<tr>
<td>Introduced in 1986</td>
<td>Introduced in 1965</td>
</tr>
<tr>
<td>17 Day Half Life</td>
<td>60 Day Half Life</td>
</tr>
<tr>
<td>20.8 Kev</td>
<td>28.5 Kev</td>
</tr>
<tr>
<td>58 Days for 90% Dose</td>
<td>204 Days for 90% Dose</td>
</tr>
<tr>
<td>Detectable in the body for 107 Days</td>
<td>Detectable in the body for 600 Days</td>
</tr>
</tbody>
</table>

Large Market Opportunities

Expanding cancer treatment options across several oncology markets

**Cesium Blu**

**Prostate**
- Building market awareness with Cesium Blu brand & clinical outcomes data
- Three straight years of 20%+ revenue growth*

*Est. 192k cases in 2020
61% cases treatable with Cesium-131

**$585M**

**Brain**
- Partnership with GT Medical Technologies
- Full scale commercialization efforts underway

*Est. 188k cases in 2020
33% cases treatable with Cesium-131

**$217M**

**Surgical**
- Opportunity for expansion into GYN, lung and other cancers
- Addressing a large unmet need in post-resection treatment

*Est. 389k cases in 2020
8% cases treatable with Cesium-131

**$208M**

*Note: Market data backup on slide 20*

Immuno-oncology combination represents a substantial incremental market opportunity
Prostate Cancer: Isoray’s Growing Core Market

Renewed sales strategy driving growth in Prostate

Growth Drivers

- Highly trained direct sales force to expand coverage in the U.S.
- Leveraging 10+ years of clinical evidence to build awareness among physicians
- Aligning product portfolio under the Blu brand
- Investing in additional clinical data and research
- Innovative training for physicians and residents
- Digital and social media awareness programs
- Recent FDA 510(k) clearance of C4 Imaging’s Sirius® positive-signal MRI markers with Cesium-131 Seeds

Proven Comprehensive Solution for Prostate Cancer

Proprietary Blu Build® Delivery Platform

Cesium-131 Seeds
Brain Cancer: Opportunity for Significant Growth

Commercialization efforts underway to treat brain cancer with Cesium-131

- Exclusive agreement with GT Medical Technologies to supply Cesium-131 seeds for use in GammaTile® Therapy
  - FDA clearance for recurrent brain tumors in 2018 and expanded clearance for newly diagnosed tumors in 2020
  - In early stage commercialization; accelerating sales efforts
  - ICD-10-PCS codes tied to the highest DRG reimbursement

- Cesium-131 in brain cancer supported by a growing number of clinical studies at major U.S. institutions

* Source: GT Medical Technologies
The GammaTile Difference

GammaTile with Cesium-131 provides a targeted and effective alternative to IMRT

Source: GT Medical

Robust Body of Evidence for Cesium-131

Cesium-131 enjoys a strong record of safety and efficacy across multiple clinical studies

**Meta-Analysis**
Data from 1,240 patients in published reports

- 10-year PSA control between 90-95% for low and intermediate risk patients
- Prostate brachytherapy with Cesium-131 achieves excellent long-term biological control

- In brain cancer Cesium-131 allows for a more reliable dose delivery than Iodine-125

- Positive safety profile observed with Resection + Cesium-131 Brachytherapy, with AEs at similar or lower rate than expected
Despite COVID-19 related challenges, Isoray continues to exhibit strong YoY quarterly growth.
Strong Gross Margin Mitigates Capital Needs to Break-Even

Recent capital raise expected to fund Isoray through break-even\(^1\)

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual Revenue</th>
<th>Gross Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>$4.8M</td>
<td>3%</td>
</tr>
<tr>
<td>2017</td>
<td>$4.8M</td>
<td>18%</td>
</tr>
<tr>
<td>2018</td>
<td>$5.9M</td>
<td>31%</td>
</tr>
<tr>
<td>2019</td>
<td>$7.3M</td>
<td>42%</td>
</tr>
<tr>
<td>2020</td>
<td></td>
<td>53%</td>
</tr>
</tbody>
</table>

Note: Isoray's fiscal year end is June 30

\(^1\) Assuming annual revenue growth of 25% and no capital expenditures over budgeted amounts over a three to four year period.
Active Pipeline Expanding Breadth of Cesium-131 Use

Ongoing initiatives in surgical cancers and IO serve as future value drivers

<table>
<thead>
<tr>
<th>Surgical Cancers</th>
<th>Immuno-oncology</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>388,550</strong> surgical cancer cases</td>
<td><strong>Cesium Blu</strong> + <strong>KEYTRUDA</strong></td>
</tr>
<tr>
<td>8% of cases treatable with Cesium-131</td>
<td>Studying Cesium-131 in combination with Keytruda to treat recurrent head and neck cancer</td>
</tr>
<tr>
<td>– Targeting cancers with large unmet medical needs</td>
<td>– Planned 50 patient Phase 1/2 study with the University of Cincinnati</td>
</tr>
<tr>
<td></td>
<td>– First brachytherapy + PD-1 inhibitor combination study in recurrent head and neck cancer</td>
</tr>
<tr>
<td></td>
<td>– Developing collaborations with additional institutions to expand immuno-oncology treatment options</td>
</tr>
<tr>
<td>– Cesium-131 placed at the site of tumor recurrence</td>
<td></td>
</tr>
<tr>
<td>– Immediate radiation delivery, no need for surgical healing</td>
<td></td>
</tr>
<tr>
<td>– New data emerging in Head and Neck, Lung, GYN and other surgical sites</td>
<td></td>
</tr>
<tr>
<td>– Collaboration with MIM Software to deliver treatment solution for recurrent Head and Neck cancer</td>
<td></td>
</tr>
</tbody>
</table>
Reimbursement Overview

Isoray is well-positioned in a changing reimbursement landscape

- CMS proposed RO-APM effective January 1, 2022 – a pilot program to evaluate changing the payment methodology to a flat rate per disease site
  - The 5-year program is expected to affect reimbursement for 30% of radiation oncology clinics
- Isoray’s Brachytherapy solution has the advantage of being low-cost, highly effective and supported by 10+ years of outcomes data
- Isoray has reimbursement for both inpatient & outpatient treatment

<table>
<thead>
<tr>
<th>Inpatient</th>
<th>Outpatient</th>
</tr>
</thead>
<tbody>
<tr>
<td>• For hospital stays in excess of two days</td>
<td>• Same day treatment and release</td>
</tr>
<tr>
<td>• Some surgical procedures and brain procedures</td>
<td>• Primarily prostate brachytherapy and some other treatments allowing quick release</td>
</tr>
<tr>
<td>• Isoray has 64 ICD-10-PCS codes for reimbursement in all areas of the body</td>
<td>• Isoray’s seeds are reimbursed separately through 2 separate C-codes for (i) individual seeds and (ii) seeds in sleeves</td>
</tr>
</tbody>
</table>
**Intellectual Property**

Multiple layers of technology and product protection

- Process, product and associated patents owned by Isoray

- Patents cover *methods and compositions* of chemical separation of Cesium-131 from Barium Carbonate
  - Four U.S. patents *in force until 2027*
  - Three international patents families including in the EU, Russia, India, Hong Kong and UK

- Products patents in process for Isoray developed devices
  - Blu Build Loader: hand-held device to customize treatment in the OR at time of implant in force until 2037
  - Device Designed to Achieve Directional Dosing: US Provisional Patent Application filed May 2020
Experienced Management Team

Lori A. Woods  
Chief Executive Officer  
• 30+ years of experience in the healthcare industry and is particularly well-known and respected in the brachytherapy community  
• Previously served as VP and COO of Isoray from 2006 to 2010  
• Extensive leadership experience in operations, supply chain management, reimbursement and marketing  
• Since assuming the role of CEO two years ago, Ms. Woods has brought respected expertise, strategic vision and insight that has built Isoray’s reputation as an innovator and industry leader in the field of brachytherapy

William A. Cavanagh  
Chief R&D Officer  
• 30+ years of experience in research and development in cancer treatment technologies  
• Joined Isoray in 2010 and has served in a variety of executive leadership roles with research and development and operations  
• Guides research and development on technology, products, and clinical strategy  
• Mr. Cavanaugh has designed several cancer treatment-related studies, is listed as an author on 34 peer-reviewed publications, and is the listed inventor on a U.S. patent application detailing a novel treatment for cancer

Jonathan Hunt  
Chief Financial Officer  
• 25+ years of finance and accounting expertise including managerial roles within a range of growth companies  
• Returned to Isoray in 2018 after previously serving as CFO from 2006 to 2009  
• Successful track record in turnarounds, startups, mergers, divestitures, growth strategies, performance and operations management and analysis at multiple organizations, including Fortune 500 companies

Jennifer Streeter  
Chief Operating Officer  
& Vice President of Human Resources  
• 20+ years of experience of progressive growth in leading teams across multiple industries in many different capacities  
• Joined Isoray in 2016 and assumed COO duties in 2019 to focus on manufacturing scale and future growth  
• Extensive managerial experience in building and implementing staffing models, performance management and providing overall training and organizational development activities

Michael L. Krachon  
Executive Vice President, Sales and Marketing  
• 20+ years of experience of progressive growth in sales and marketing in the med tech industry  
• Joined Isoray in 2016; formerly lead the international brachytherapy business at CR Bard  
• Instrumental experience restructuring sales and marketing teams, creating and implementing industry standard brachytherapy physician training programs and holds multiple patents on brachytherapy delivery systems
# Market Data

<table>
<thead>
<tr>
<th></th>
<th>NYSE MKT</th>
<th>ISR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share Price</td>
<td>$1.35</td>
<td></td>
</tr>
<tr>
<td>52 Week Range</td>
<td>$0.35 - $2.00</td>
<td></td>
</tr>
<tr>
<td>Market Cap</td>
<td>$117.7M</td>
<td></td>
</tr>
<tr>
<td>Common Shares Outstanding</td>
<td>~87.2M</td>
<td></td>
</tr>
<tr>
<td>Fully Diluted Shares Outstanding</td>
<td>~107.7M</td>
<td></td>
</tr>
</tbody>
</table>

(1) Share price data as of January 7, 2021
(2) Includes 15.0M warrants and 5.5M options
Investment Recap

- **Emerging leader in radiotherapeutics focused on commercializing proprietary Cesium-131 therapy for the treatment of cancer**

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  - Evaluating Cesium-131 for treatment of surgical cancers, including GYN, lung and others

- **Experienced management team with deep industry expertise**

- **Recent capital raise improves liquidity position for foreseeable future**
  - $9.5M in gross proceeds from 10/20/2020 stock offering

* 10/1/2019 – 9/30/2020
Appendix

NYSE American: ISR
## Addressable Market with Cesium-131

### Cesium-131 Targeting > $1B Opportunity

<table>
<thead>
<tr>
<th>Disease State</th>
<th>2020 Estimated Annual Diagnosis</th>
<th>Potential LDR Patients</th>
<th>Potential Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prostate Cancer</strong></td>
<td>191,930</td>
<td>117,077 (61% Treatable with Cs-131)</td>
<td>$585M @ $5,000 per Treatment w/ Cs-131</td>
</tr>
<tr>
<td><strong>Brain Cancer</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Primary CNS Cancer</td>
<td>187,820</td>
<td>62,000 (33% Treatable with Cs-131)</td>
<td>$217M @ $3,500 per Treatment w/ Cs-131</td>
</tr>
<tr>
<td>- New Metastases</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Recurrent Cancer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gynecological Cancers</strong></td>
<td>107,400</td>
<td>5,370 (20% Recurrence Rate) (25% Treatable with Cs-131)</td>
<td>$19M @ $3,500 per Treatment w/ Cs-131</td>
</tr>
<tr>
<td>- Uterus</td>
<td>61,880</td>
<td>5,350</td>
<td></td>
</tr>
<tr>
<td>- Ovary</td>
<td>22,530</td>
<td>6,070</td>
<td></td>
</tr>
<tr>
<td>- Cervix</td>
<td>13,170</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Vagina &amp; Other Genital</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Vulva</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Head &amp; Neck Tumors</strong></td>
<td>53,000</td>
<td>13,250 (25% Treatable with Cs-131)</td>
<td>$132M @ $10,000 per Treatment w/ Cs-131</td>
</tr>
<tr>
<td>- Mouth</td>
<td>14,310</td>
<td>3,760</td>
<td></td>
</tr>
<tr>
<td>- Pharynx</td>
<td>17,870</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Tongue</td>
<td>17,060</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Other oral cavity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lung Cancers</strong></td>
<td>228,820</td>
<td>11,441 (5% Treatable with Cs-131)</td>
<td>$57M @ $5,000 per Treatment w/ Cs-131</td>
</tr>
</tbody>
</table>

**Total Opportunity** 768,970 209,138 Patients ~$1B

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1. [https://cancerstatisticscenter.cancer.org/]
2. [https://www.mskcc.org/cancer-care/types/brain-tumors-metastatic]

*Estimates of cases based on internal assessments from ACS data, market reports.*