

Introduction of Ad-Tech Medical Instrument Corporation

Nihon Kohden Corporation
(Ticker Code: 6849)
December 19, 2024

Fighting Disease with Electronics



Agenda

I Long-term Vision and Three-year Business Plan

Hirokazu Ogino, Representative Director, President and Chief Executive Officer

II Outline of Neurology Business and Ad-Tech Medical Instrument Corporation

Kaoru Imajo, Operating Officer, Chief Strategy & Innovation Officer,
In charge of Business Strategy, R&D, Brand Equity

III Strategic Positioning in North America Business

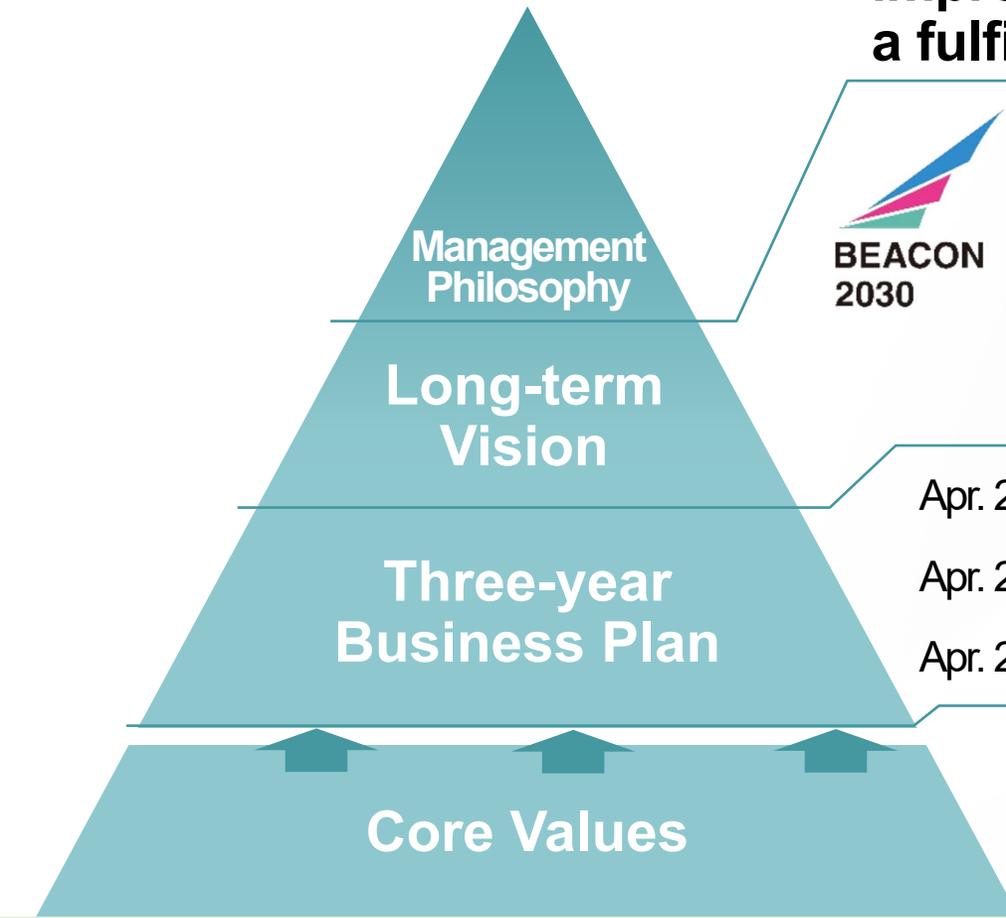
Eiichi Tanaka, Corporate Director, Senior Operating Officer, Chief Regional Officer - North America,
General Manager of North America Business Operations,
President of Nihon Kohden North America, Inc.

IV Q&A

Long-term Vision and Three-year Business Plan

Long-term Vision and Three-year Business Plan

We contribute to the world by fighting disease and improving health with advanced technology, and create a fulfilling life for our employees.



Illuminating Medicine for Humanity

Create a better future for people and healthcare by solving global medical issues

Targets for
FY2029

Operating
Margin

15%

Overseas
Sales Ratio

45%

Apr. 2027 - Mar. 2030 **BEACON 2030** Phase III: Realize BEACON 2030

Apr. 2024 - Mar. 2027 **BEACON 2030** Phase II: Invest for growth

Apr. 2021 - Mar. 2024 **BEACON 2030** Phase I: Strengthen foundation

Core values are shared by Nihon Kohden staff worldwide, helping to connect them and contributing to the promotion of our Management Philosophy, Long-term Vision, and Three-year Business Plan.

Integrity / Humbleness / Diversity / Initiative / Customer Centric / Goal Oriented / Creativity

3 Indicators and 6 Key Measures in Three-year Business Plan

Implement the reform of the profit structure and make investments in growth areas, and accelerate our transformation into a global MedTech company

1) Growth

Sales CAGR
FY2023 - FY2026

5%

Enhance product competitiveness

Focus on growth of North America Business

2) Profitability

Operating income margin
in FY2026

15%

Implement the reform of the profit structure

Advance global supply chain management

3) Capital efficiency

ROE
in FY2026

12%

Introduce Nihon Kohden's own ROIC formula

Reduce cash conversion cycle

Practice of Sustainability Management

Medical issues

Environmental issues

Social issues

Cash + Debt

FY2024 – FY2026
Operating Cash Flow

**¥80 bil
or more**



Growth Investment / M&A: ¥30 bil or more

*Investing in areas such as DHS which have synergies with existing businesses



Capital Investments: Apx. ¥25 bil

*Construction of Tsurugashima plant: ¥9.2 bil,
Introduction of PLM/MES systems: ¥2.2 bil



Shareholder Returns: ¥28 bil or more

*Considering additional shareholder returns depending on the progress of future investment plans

Cash + Debt

FY2021-FY2023
Operating
Cash Flow

¥38.7 bil

Fundraising policy

- Using its own funds as the Group's main source of working capital and capital expenditure.
- Considering borrowing as an effective means of raising funds, when fundraising becomes necessary, such as for M&A and new businesses and optimizing the weighted average cost of capital, which also takes into account the cost of debt.

Necessary cash and deposits

- The level of cash and deposits on hand necessary for stable operations is approx. three months of monthly sales.

Past M&A Cases

May 2006
Acquired
Beneficks Corporation
through third-party
allocation of shares

EMR



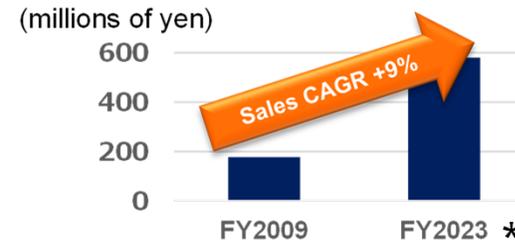
April 2008
Acquired shares of
**Nippon Bio-Test
Laboratories Inc.**

IVD
reagent



December 2008
Acquired shares of
Neurotronics, LLC

Neurology



March 2011
Established
**Nihon Kohden India
Pvt. Ltd.**
by taking over sales division
from Span



November 2012
Acquired equity interest of
Defibtech, LLC

Resuscitation

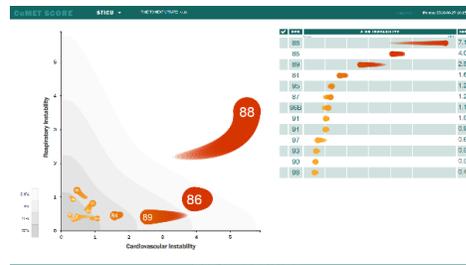


August 2021
Acquired shares of
AMP3D, LLC

DHS

CoMET®: Continuous
Monitoring of Event
Trajectories
Algorithm and software for
patient condition
management

Re-application for FDA
approval in FY2024 1H



November 2022
Acquired shares of
Software Team Srl

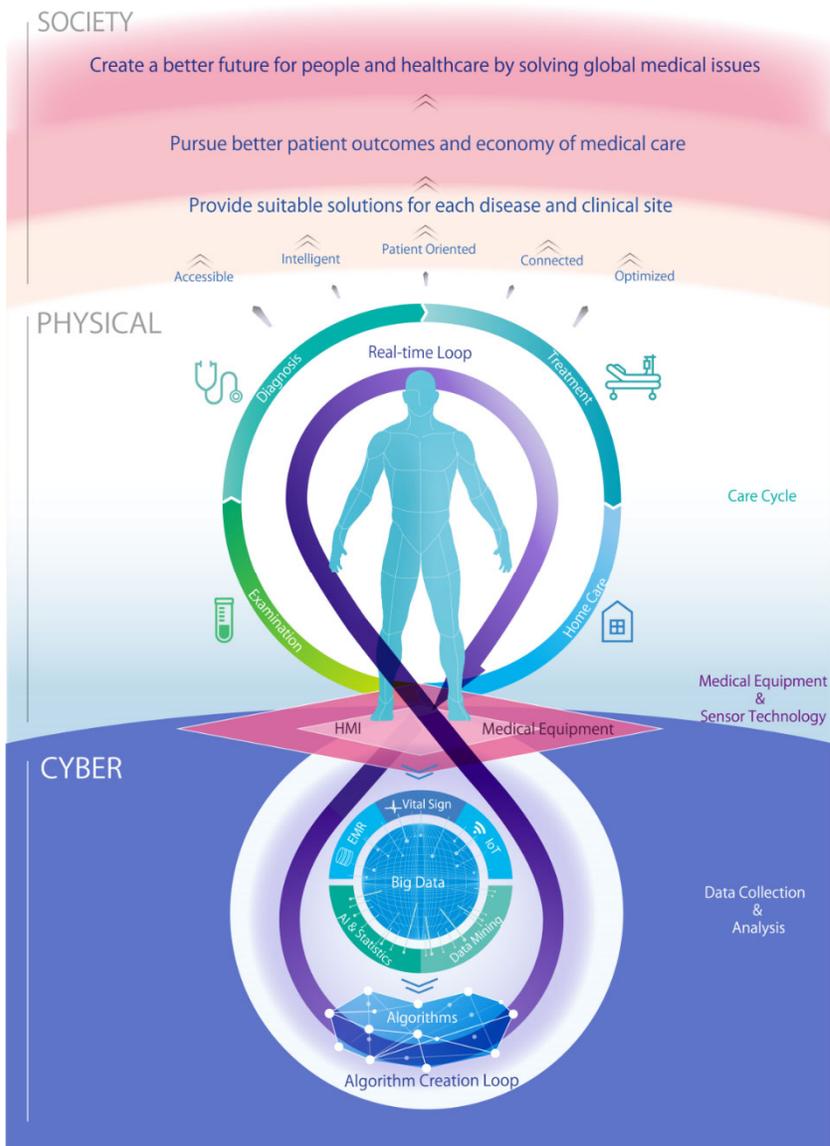
DHS

SmartLink
Alarm Solutions

Co-development
in Italy, the U.S.,
and Japan



Value Creation Compass Toward 2030



● Patient outcomes and economy of medical care

We aim to create value that addresses global medical issues of achieving better patient outcomes and improving the economy of medical care.

● Suitable solutions for each disease and clinical site

We aim to provide the optimal care cycle solution for each patient, from examination, diagnosis, and treatment to home care.

● HMI* technology and medical equipment

HMI technology is one of our core strengths and serves as an important touchpoint with patients throughout their clinical journey.

HMI technology and medical equipment give us access to patients and clinical sites which enable us to create value.

● Value creation from data gathered through clinical sites

Nihon Kohden will develop a data integration platform and pioneer algorithms to create new value from information. Vital sign data, IoT data and EMR information will be integrated as a big data. Algorithms for clinical prediction models will be developed using AI and data analysis.

● Real time loop to respond to clinical needs

By combining HMI technology and medical equipment used in the medical field, and new algorithms created from big data analysis, we provide solutions that can respond to clinical needs in real time.

* Human machine interface is the user interface that connects human and machine. For Nihon Kohden, this refers to sensor technology, signal processing technology, and data analysis technology.

Started Nihon Kohden's Business with EEG

1951

World's First



AC-powered
direct-writing
EEG

Present

Global leader in Electroencephalographs

U.S. top hospitals, which accept trainee doctors from across the globe, are using Nihon Kohden's EEGs.



#7 Johns Hopkins Hospital



#16 Cleveland Clinic

* U.S. News Best Hospitals: Neurology & Neurosurgery in 2023 - 2024

Acquired 71.4% Shares of Parent Company of Ad-Tech in November 2024



Ad-Tech Medical Instrument Corporation

- Head office: Wisconsin, U.S.A.
- Establishment: 1983
- Representative: Brian P. Smith (CEO)
- Business: R&D, production, and sales of medical equipment (ISO 13485 certification)
- Employees: 165
- Sales: \$28M (FY2023)
North America 83%, Europe 12%, Rest of World 5%
- Operating income: \$2.8M (FY2023)
- Adjusted EBITDA: \$9.0M (FY2023)
(Excluding costs related to MDR* and legal/expert fees, etc.)
- Fiscal term: December
(Planned to consolidate B/S in FY2024 3Q, P/L in FY2025)
- Acquisition costs: approx. ¥16.0 bil (71.4% shares)
(Estimated amount including advisory fees, etc.)
- Goodwill amortization period: undecided
(Planned to determine by the announcement of FY2024 3Q)



Synergies Expected Together with Ad-Tech



Main products (consumables):
Intracranial electrodes such as depth electrodes and subdural electrodes used for surgical treatment of drug-resistant epilepsy

Relationship:
Nihon Kohden has distributed Ad-Tech's products for more than 30 years with exclusive distribution rights in Japan

High affinity between Nihon Kohden's neurology products and Ad-Tech's intracranial electrodes

Strengthening HMI* technology with Ad-Tech's technological know-how and production of consumables used in invasive testing and treatment

Stable and consistent revenue base and growth by expanding consumables portfolio

Strengthen Nihon Kohden's global competitiveness, especially in North America, by leveraging our strength in Neurology Business

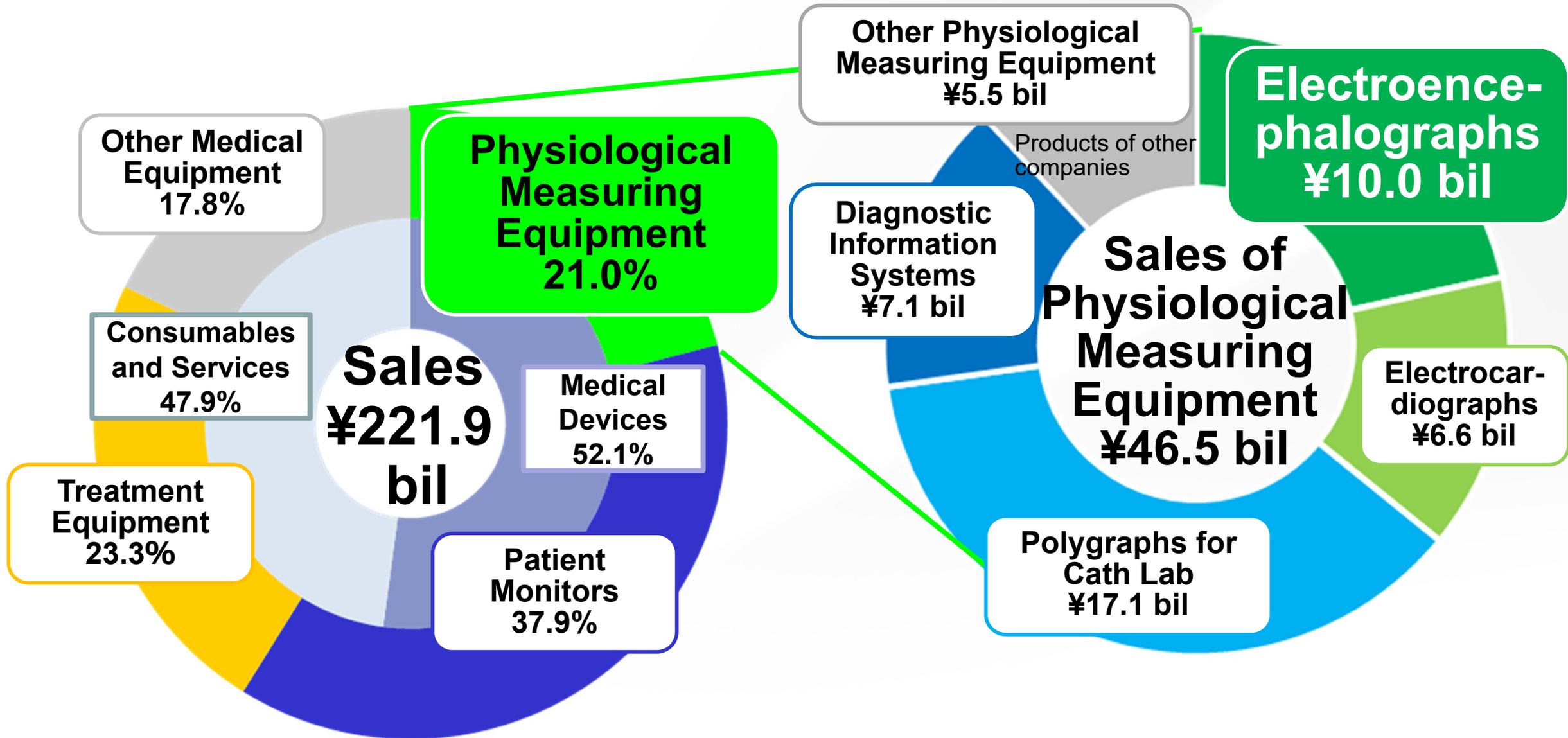
Provide Neuromonitoring Solutions and Digital Health Solutions by acquiring HMI Technology

Realize high profitability of Neurology Business by expanding consumables portfolio

* Human Machine Interface is the user interface that connects human and machine. For Nihon Kohden, this refers to sensor technology, signal processing technology, and data analysis technology.

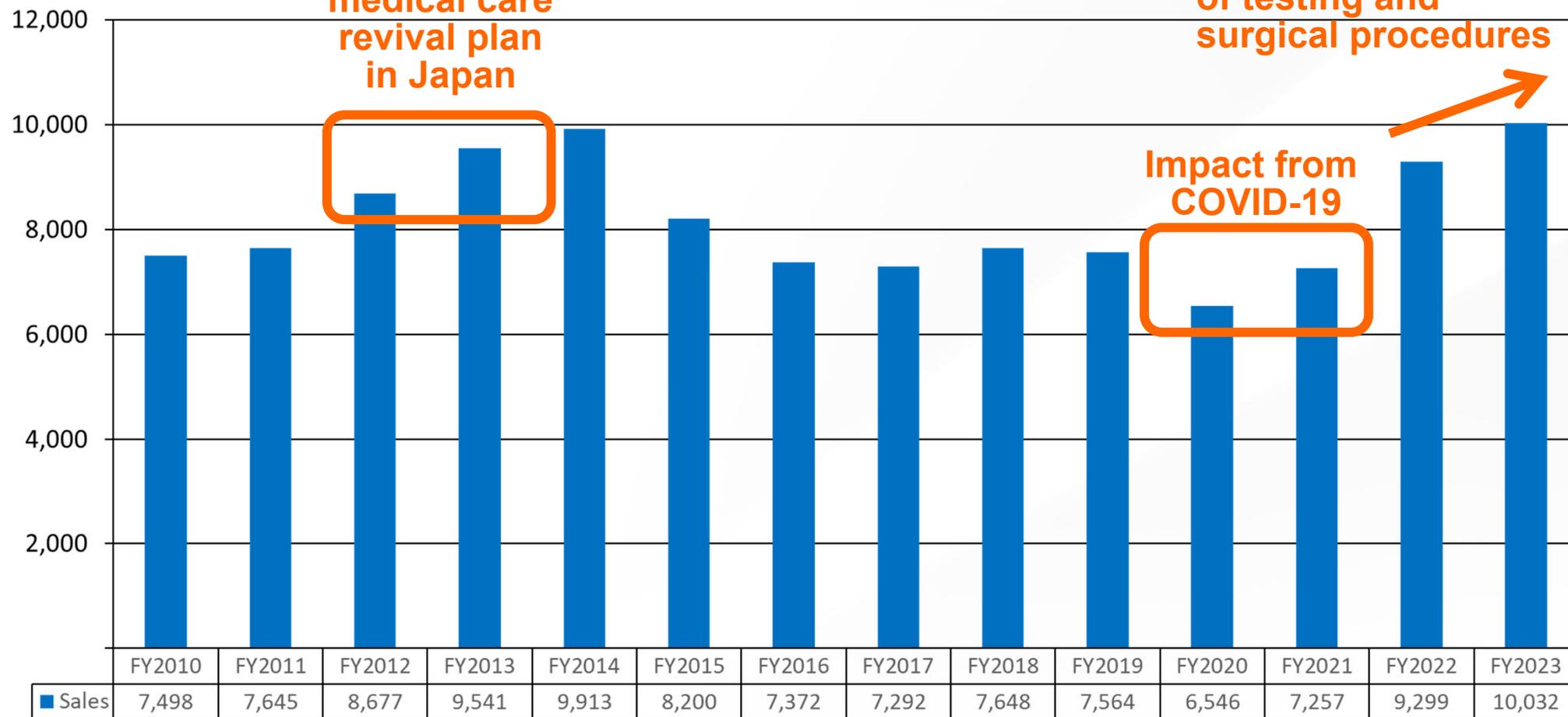
Outline of Neurology Business and Ad-Tech Medical Instrument Corporation

Sales Composition of Physiological Measuring Equipment in FY2023



Sales of Electroencephalographs (Neurology Products)

(Millions of yen)



Regional medical care revival plan in Japan

Recovery in number of testing and surgical procedures

Impact from COVID-19

Market size

\$350M (2023)

+ Mid-single digit
(2023-29 CAGR)

Sales CAGR

+ Low-single digit

(FY2010-FY2023)

Japan + Low-single digit
Overseas + Mid-single digit
Developed countries
+ Low-single digit
Emerging countries
+ Double digit

Overseas Sales Ratio

42% → 53%

(FY2010) (FY2023)

Consumables and Services Sales Ratio

13% → 27%

(FY2010) (FY2023)

Nihon Kohden's Neurology Products Line-up

Medical Devices

Consumables

DHS Applications



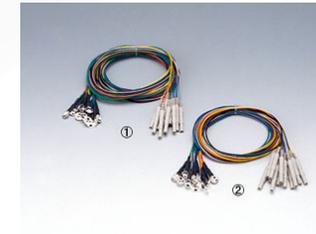
Electroencephalograph



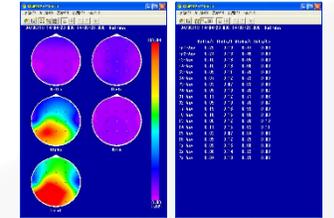
EEG headset



Home sleep recorder



EEG electrodes



EEG analysis program



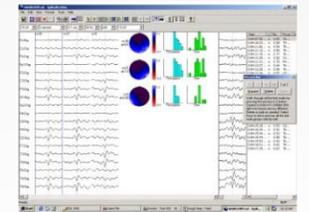
Electromyograph/
Evoked potential
measuring system



Intraoperative
neurophysiological
monitoring



Paste for EEG/EMG



Spike detection program

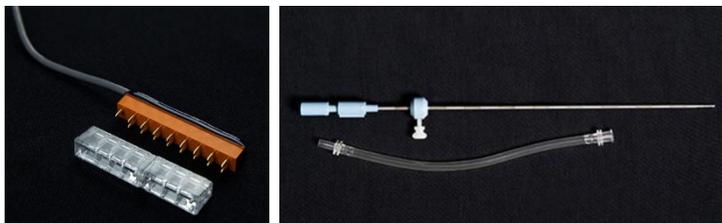


EMG electrodes for
neuromuscular monitoring

Started Proof of
Concept of EEG
remote interpretation
results using Allm's
Join EEG in ER/ICU

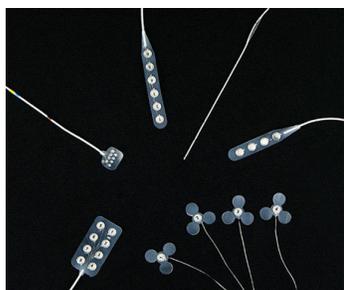
Consumables

Placement accessories, connection systems, brain biopsy needles, etc.



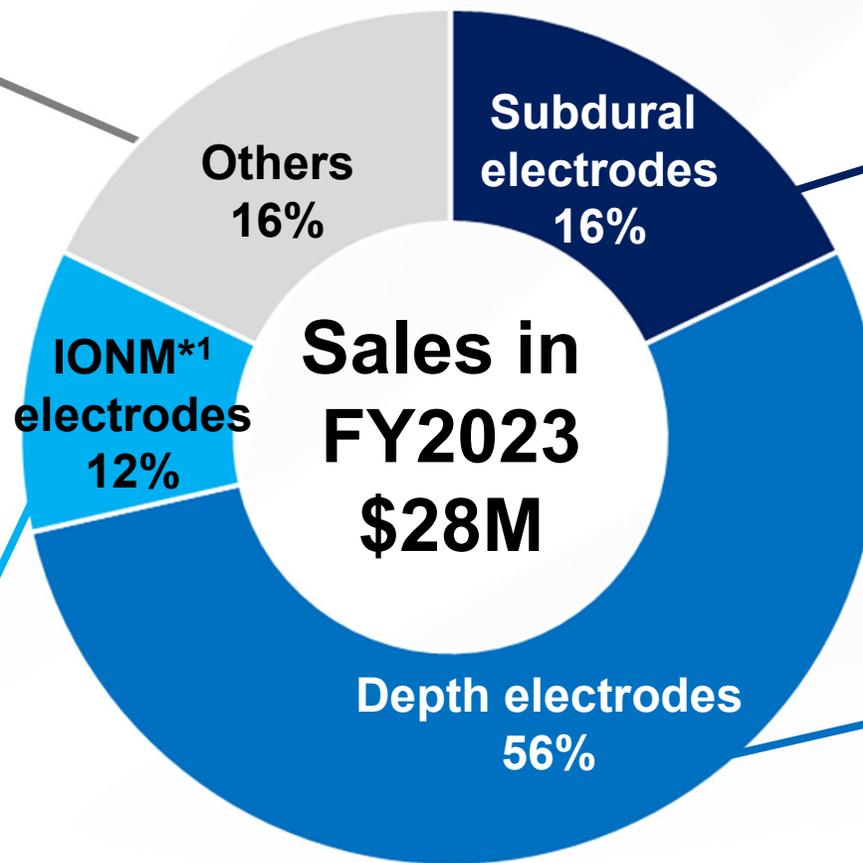
+ Low-single digit growth
(2024-28 Sales CAGR)

Electrodes used for continuous monitoring of brain, spinal cord, or nerves during surgery

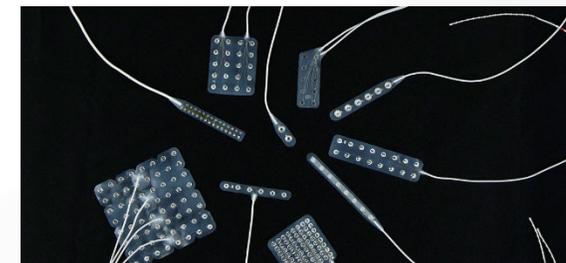


+ High-single digit growth
(2024-28 Sales CAGR)

*1 IONM: Intraoperative neurophysiological monitoring.

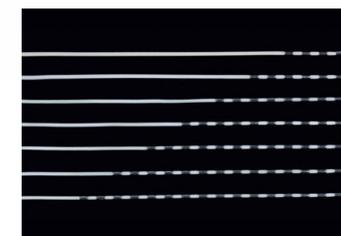


Electrodes used for monitoring, mapping, or stimulating surface of brain during surgery, including diagnosis of epilepsy or tumors



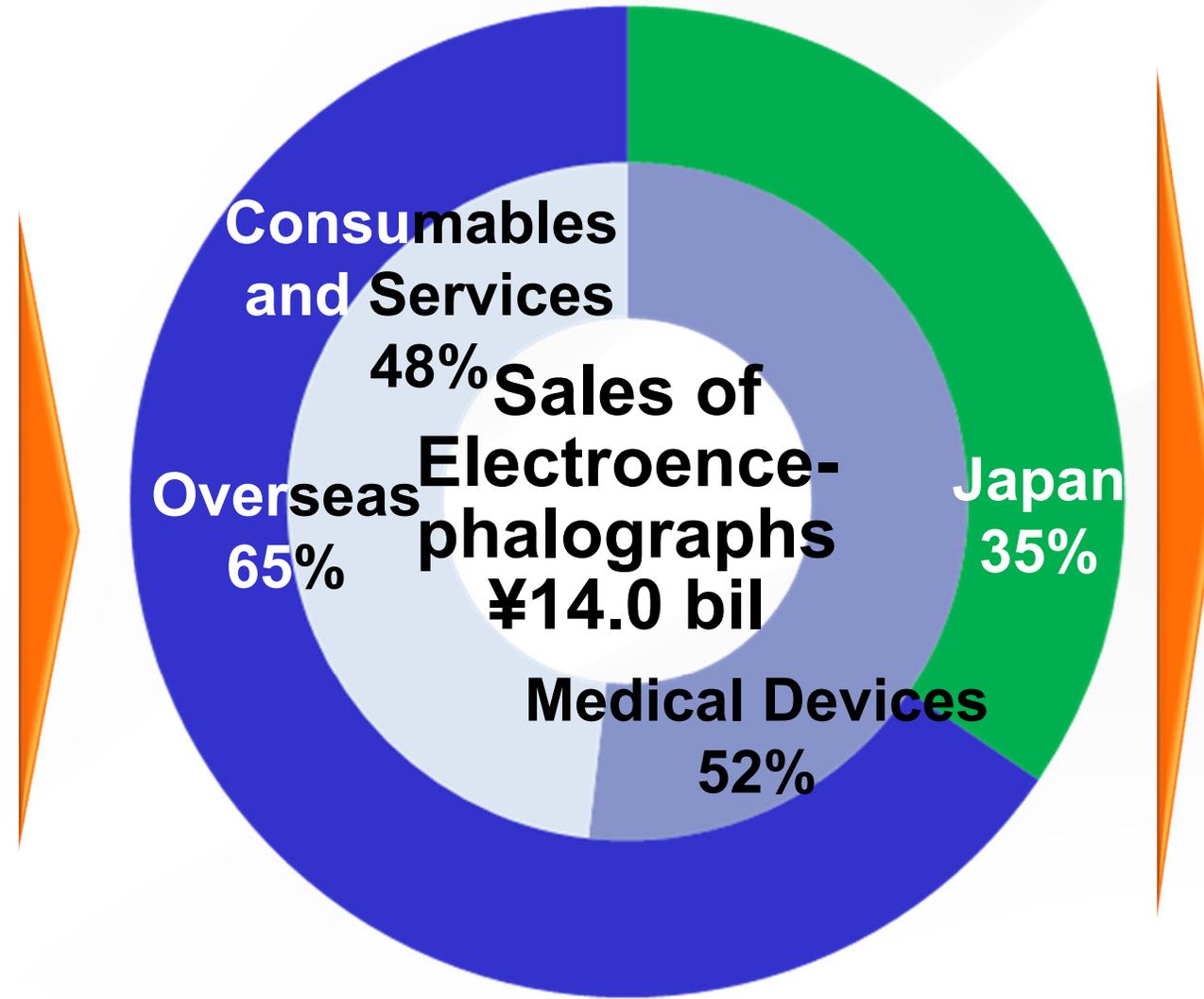
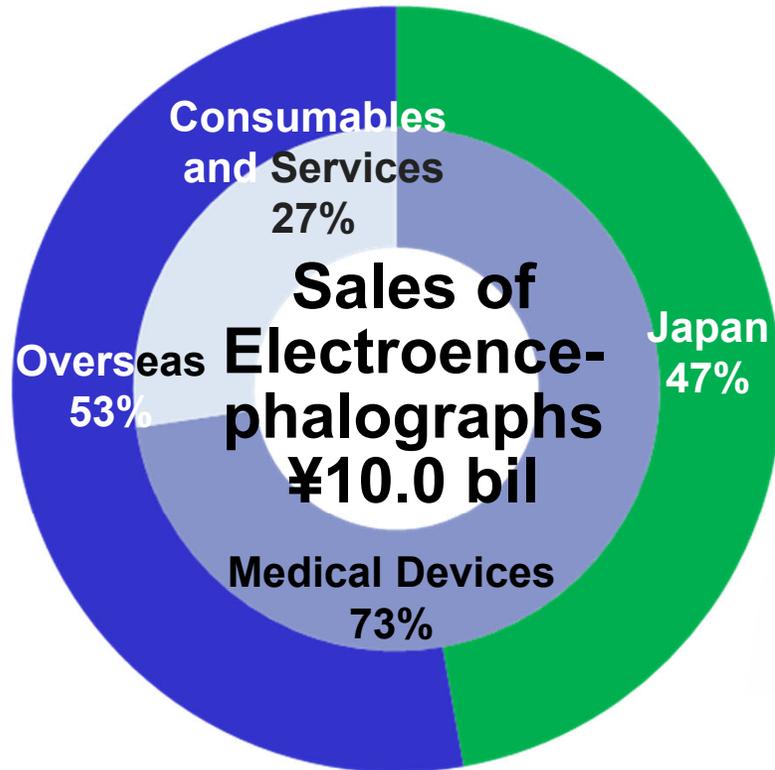
+ Low-single digit growth
(2024-28 Sales CAGR)

Electrodes such as SEEG*2 electrodes used for monitoring/mapping subsurface levels of brain for surgical treatment of epilepsy or traumatic brain injury



+ Mid-teens growth
(2024-28 Sales CAGR)

Sales Composition Including Ad-Tech in FY2023



**Sales CAGR
+ High-single digit
in Phase II**

Consolidated Ad-Tech's net sales of \$28M in fiscal year ended Dec. 2023, based on an exchange rate of 144 yen to the U.S. dollar.

Medical Issues in Epilepsy Treatment

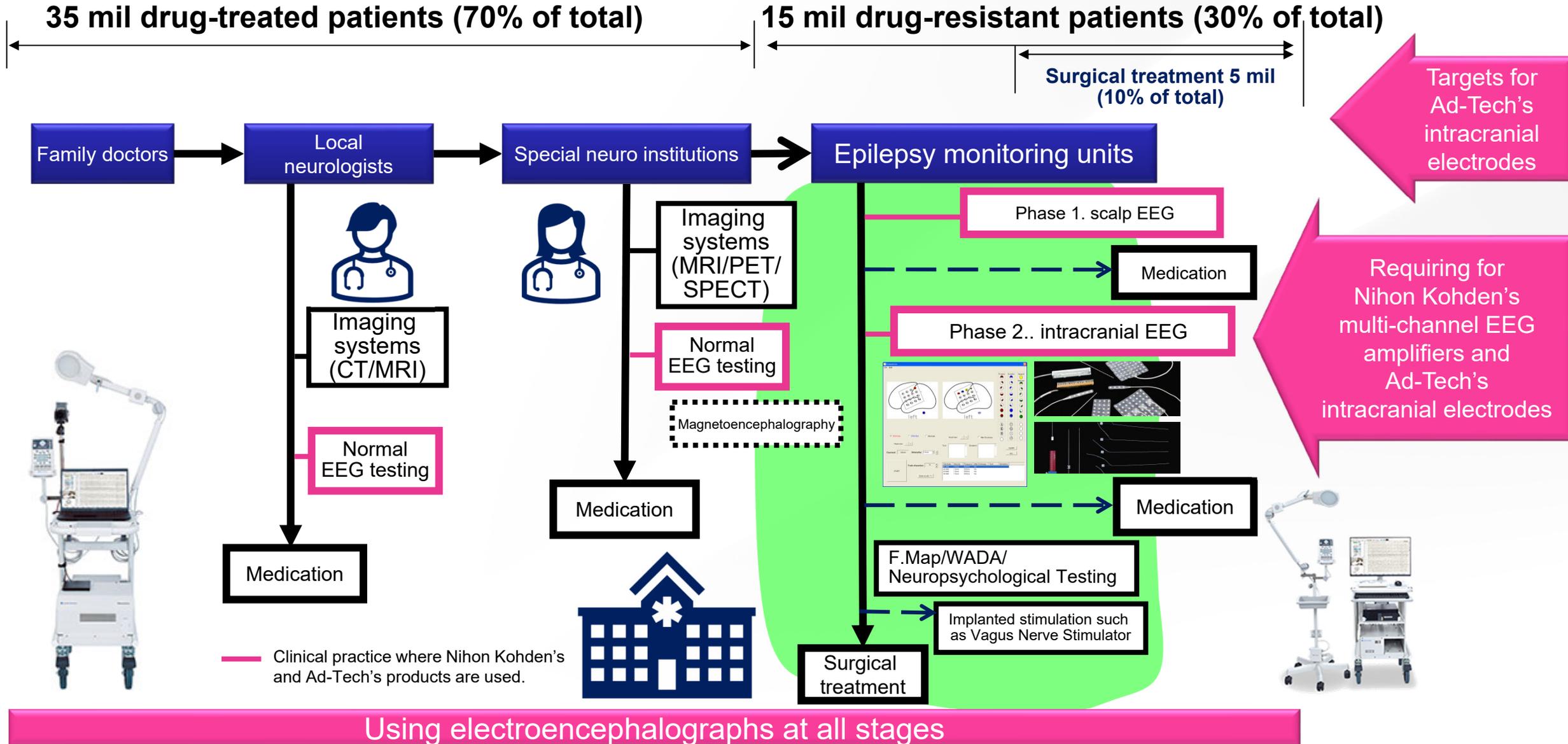
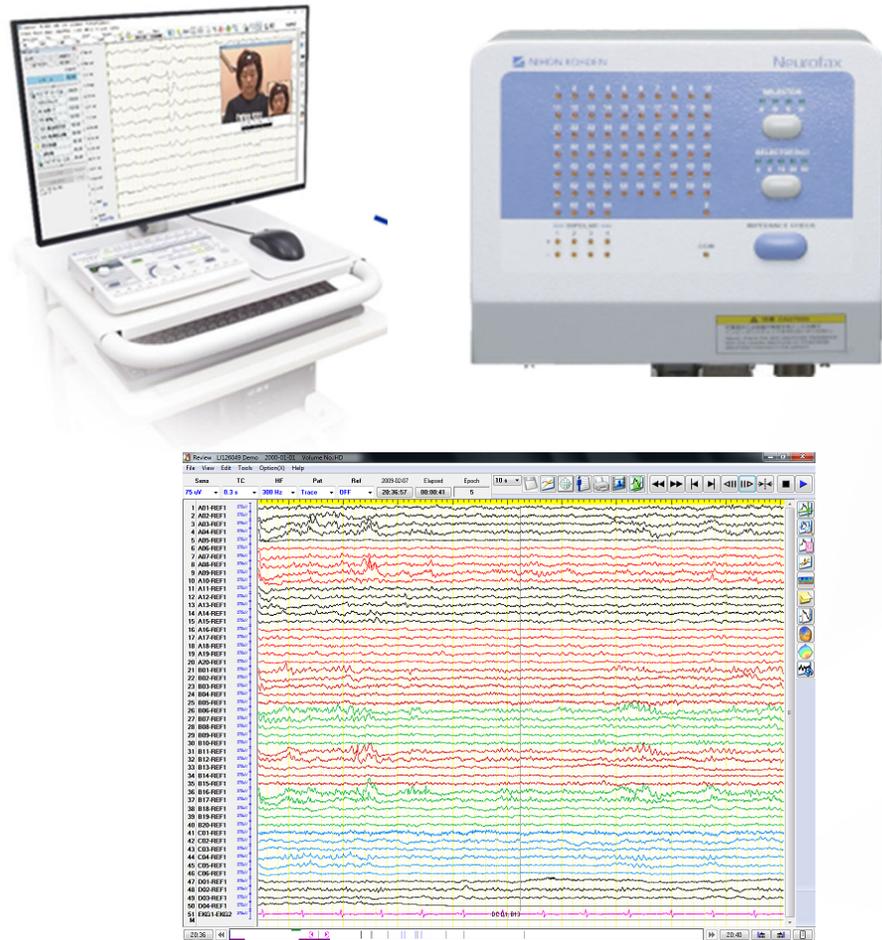
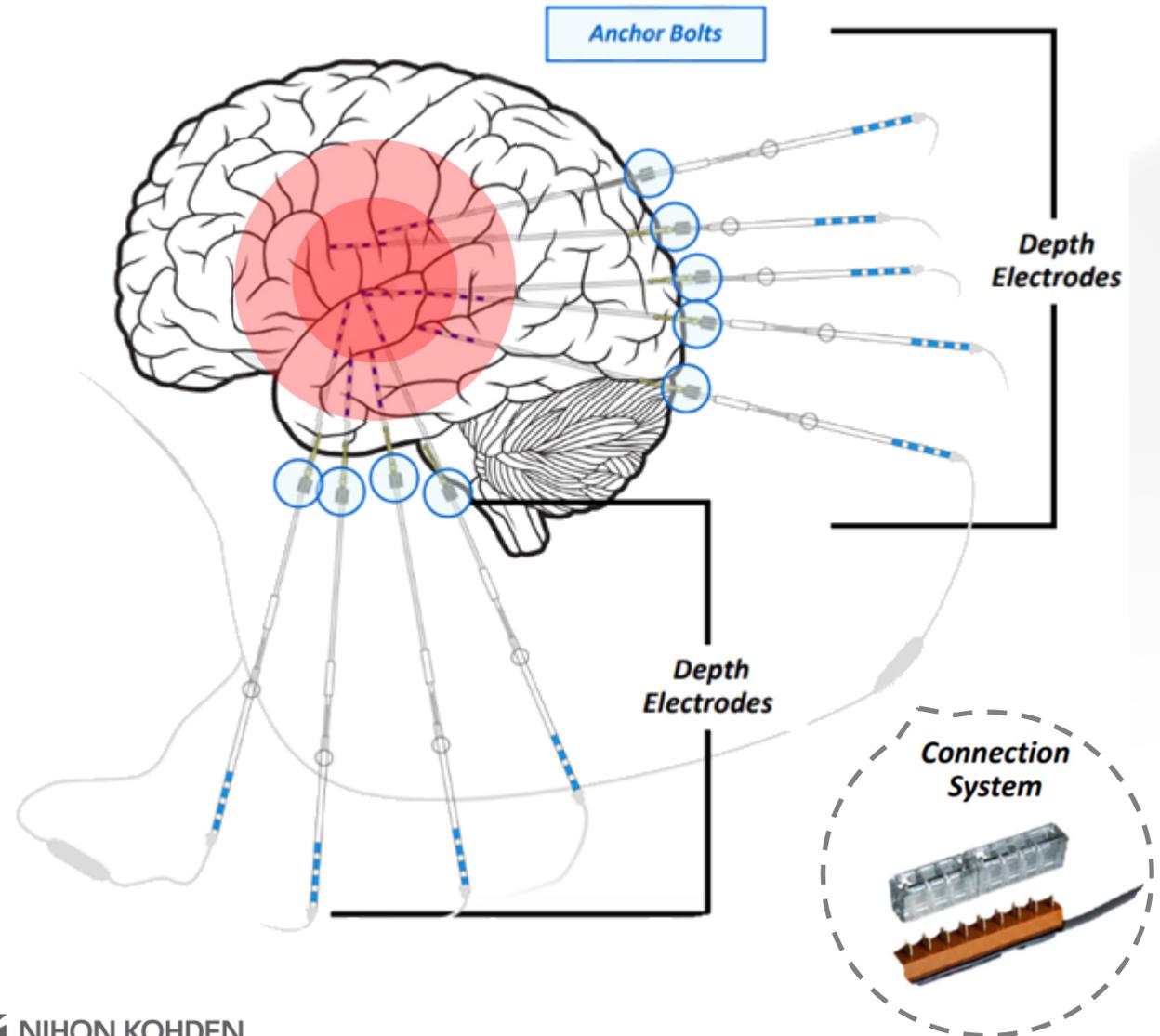


Image of Each Role in Diagnosis of Epilepsy

Nihon Kohden's EEGs



Ad-Tech's depth electrodes



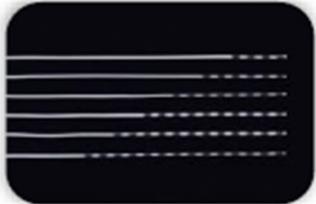
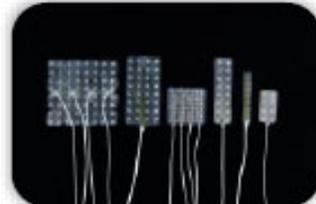
Providing Advanced Neuromonitoring Solutions



Diagnosis and treatment of epilepsy (EEG, ECoG*, SEEG)

Intraoperative neurophysiological monitoring (IONM)

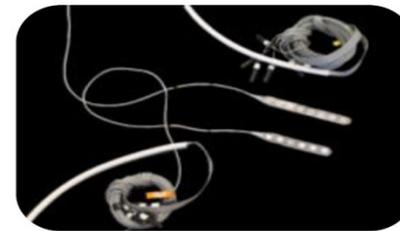
Neurocritical care



Beyers, Dahlia		Coombes, Chad		Gahan, Hee	
Room H	Room L	Room L	Room L	Room F	Room F
93	62	95	59	85	55
62	49	59	47	55	46

Chatmon, Brad		Fritsche, Karole		Koeller, Pedro	
Room D	Room N	Room N	Room R	Room R	Room R
98	54	92	69	95	65
54	53	69	56	65	49

Bellantoni, Trish		Cambareri, Neely		Dople, Emory	
Room K	Room O	Room O	Room S	Room S	Room S
89	51	89	62	92	69
31	10.8/9.9	32	4.4/0.2	42	2.5/0.7
W	R 66.6 6m	N3	F 78.0 2m	N1	B 61.8 0m



Neuro Digital Health Solutions

Image of Initiatives in Neurocritical Care

Neurocritical Care

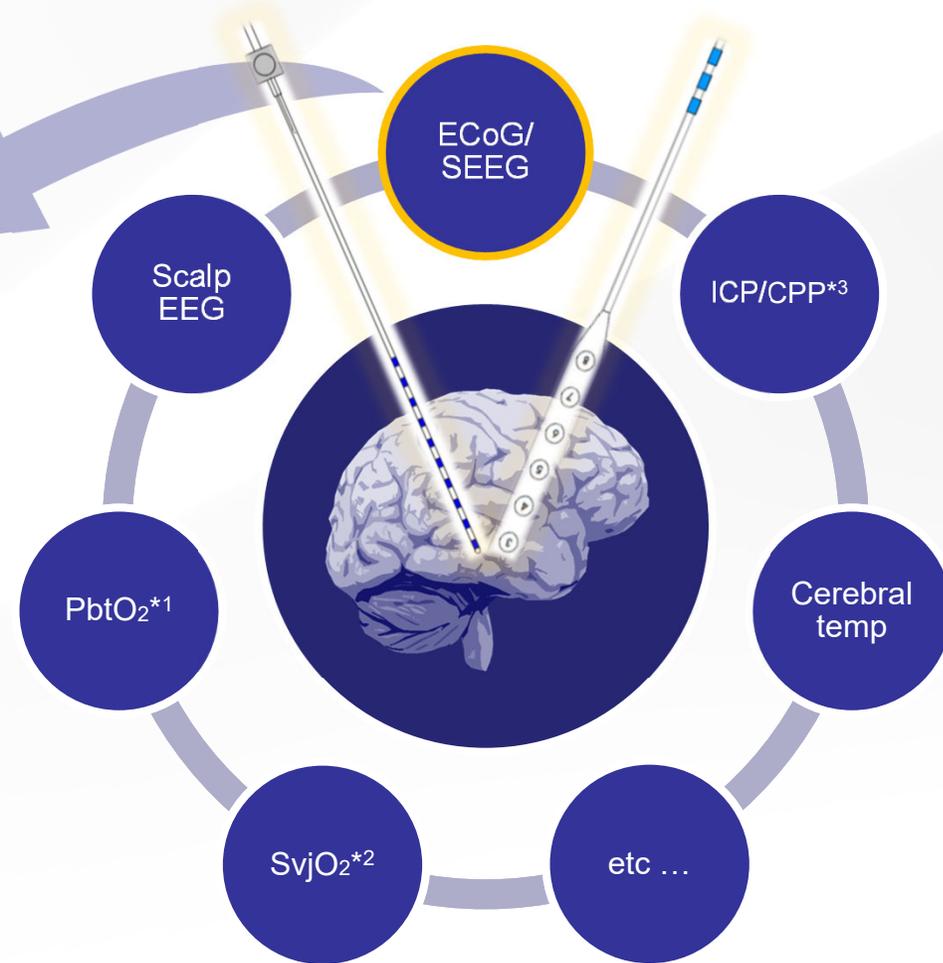
Cardiac ✓ Lung ✓ Brain ?



Prevention of secondary brain damage*

* A secondary brain damage caused by cerebral ischemia, cerebral metabolic disorders, or changes in the intracranial environment after direct brain damage.

Cortical Spreading Depolarization (CSD)



*1 PbtO₂: Partial pressure of brain tissue oxygen.

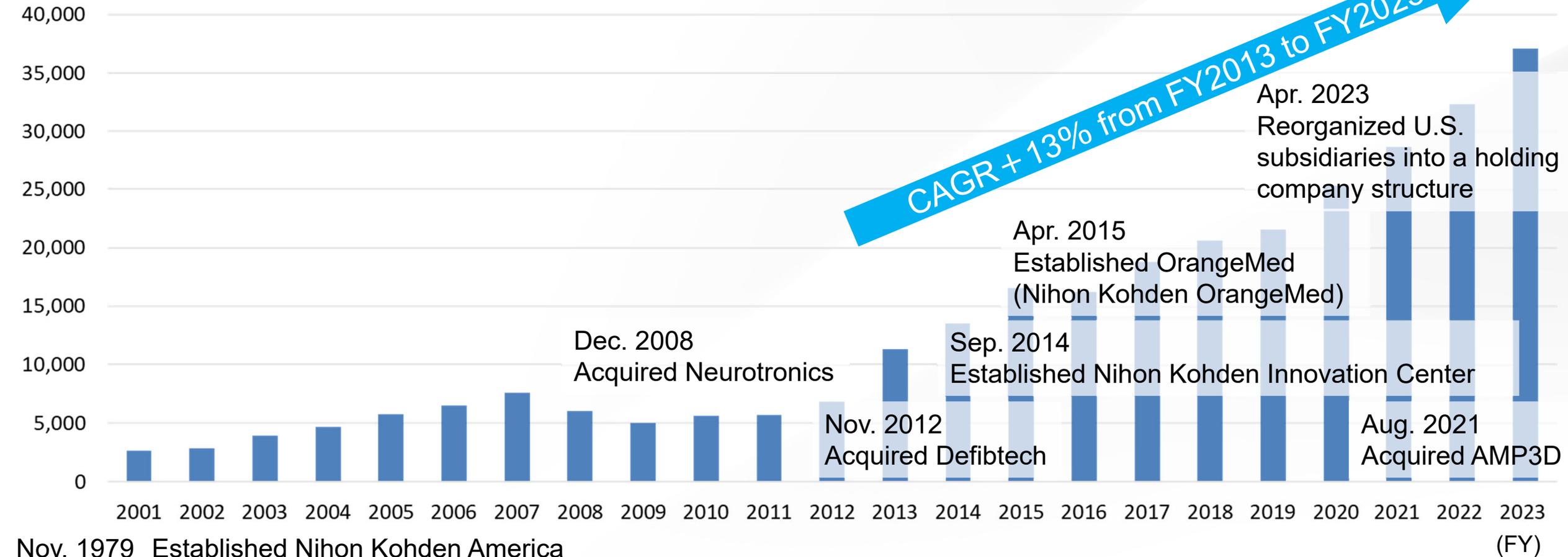
*2 SvjO₂: Jugular venous oxygen saturation.

*3 ICP: Intracranial pressure, CPP: Cerebral perfusion pressure.

Strategic Positioning in North America Business

Sales in North America

(millions of yen)



Nov. 1979 Established Nihon Kohden America

Sep. 1999 Established NKUS Lab
(Nihon Kohden Digital Health Solutions)

7 subsidiaries in North America Business Operations



OrangeMed



Santa Ana, CA
Development,
production and
sales of ventilators



Digital Health Solutions

Irvine, CA
Development of innovative
and high-value added
solutions based on data
from medical devices
such as patient monitors



AMP3D

Charlottesville, VA
R&D of algorithms and
software for patient
condition management
Acquired in 2021

NIHON KOHDEN AMERICA



Gainesville, FL
Development and
production of sleep
analysis software
Acquired in 2008



**NIHON KOHDEN
INNOVATION CENTER**

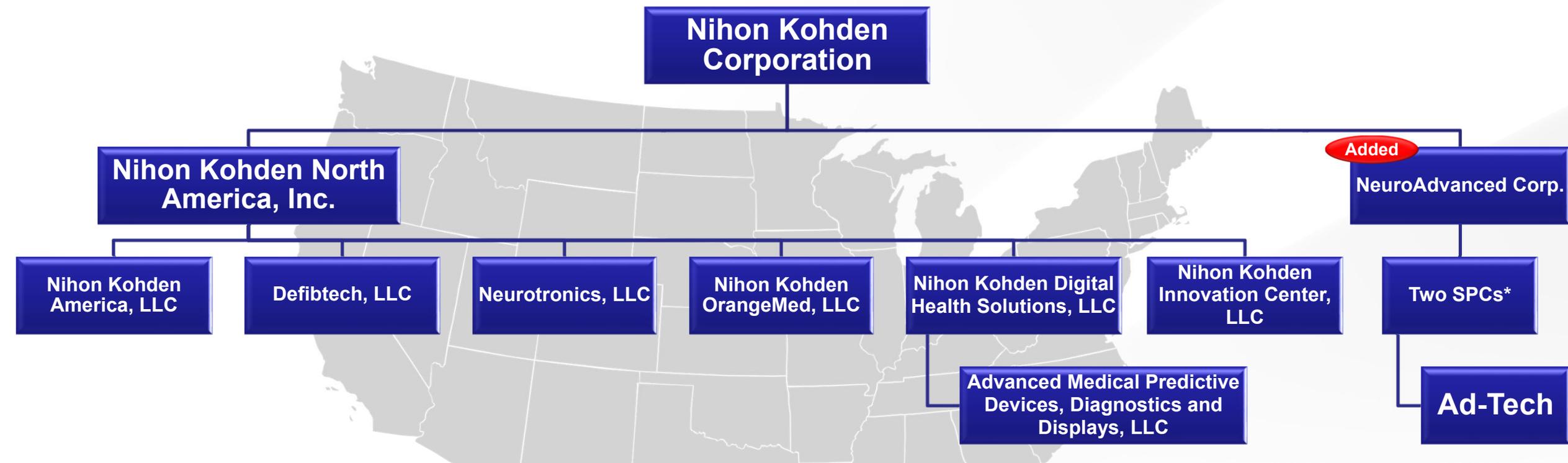
Cambridge, MA
Exploration of innovative
research themes with
universities, hospitals
and venture companies



Guilford, CT
Development, production,
and sales of resuscitation
products such as AEDs
and automated chest
compression devices
Acquired in 2012



New Management Structure



Management structure of Ad-Tech Medical Instrument Corporation

■ Directors

Appointed Mr. Brian Smith, three directors from Nihon Kohden, and one director from ARCHIMED.

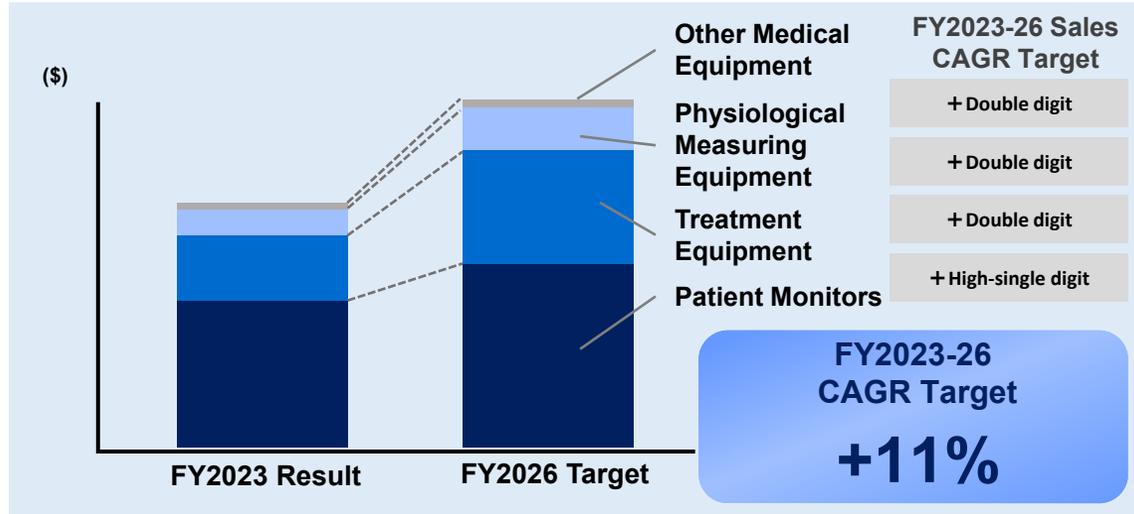
■ Operating structure

No major changes from the previous Senior Management Team.

<https://adtechmedical.com/about-us>

Initiatives for North America Business in Three-year Business Plan

Steady growth of patient monitoring/neurology business. Establishing a presence in ventilator business. Early launch of resuscitation products in the pre-hospital market.



Neurology

- Establishing a leading position in epilepsy monitoring
 - Improving workflow in ICU/EMU* through providing EEG amplifiers with enhanced network capabilities and waveform noise reduction technology
 - Developing epilepsy telehealth solutions in chronic/acute care
- Solving issues in neurocritical care **Added**
 - Preventing secondary brain damage by creating synergy among EEGs, patient monitors, and ventilators

Ventilator

- Establishing a market presence and providing our unique solutions
 - Establishing sales and service structure specialized for ventilators
 - Enhancing cross-selling with patient monitors and neurology
 - Promoting our unique SpO₂ sensors/CO₂ masks
 - Starting to develop a smaller ventilator
 - Enhancing connections to HIS/EMR and offering integrated alarm management

Patient monitors

Creating synergies with equipment and DHS by providing subscription-based solutions

- Promoting medical devices and network care services with high reliability and scalability
- Realizing remote ICUs based on the NK Digital Health Platform

Three-year target share

FY2023: 10% → FY2026: 12.5%

Resuscitation

- Entering to pre-hospital market by expanding product line-up
 - Plans to receive FDA approval for defibrillators for ambulances developed in Japan/U.S.

Total solution in resuscitation area

DHS : NK Digital Health Platform

Support medical workers' decision making by consolidating continuous / non-continuous vital sign data

Improve Patient Outcomes

Improve Operating Efficiency

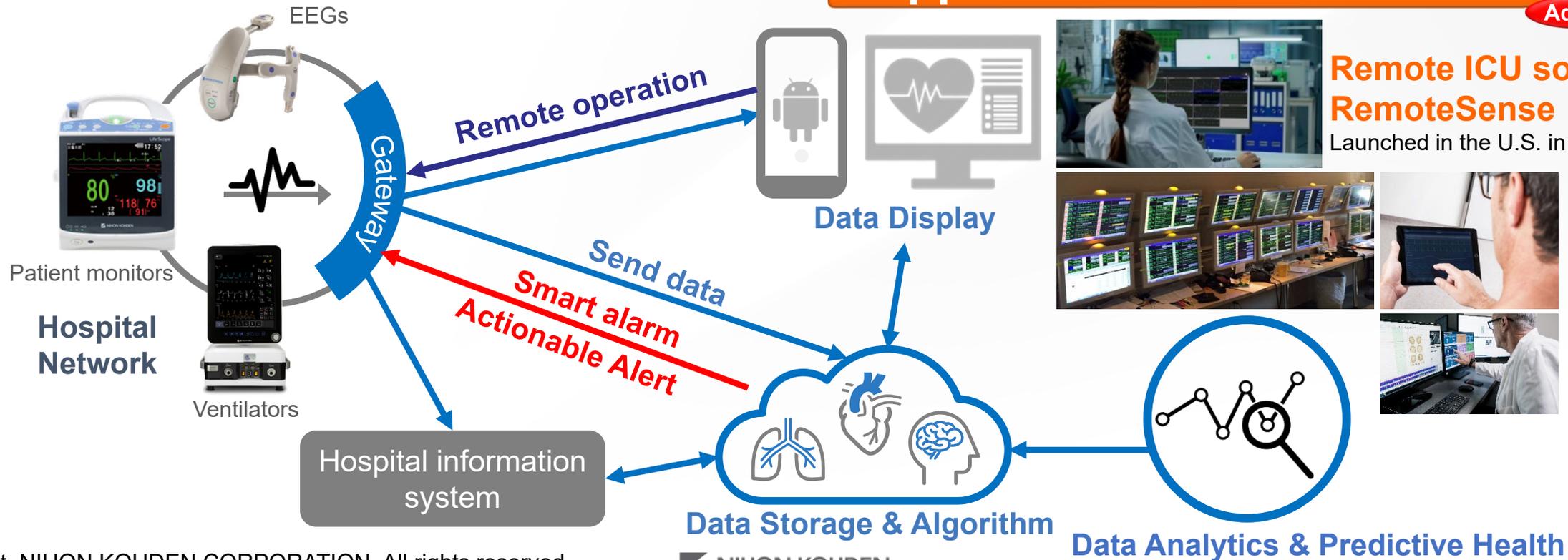
Prevent Medical Incidents

Support Multi-site Treatment

Added

Remote ICU solution
RemoteSense

Launched in the U.S. in FY2024 1H



Market Size of Vital Sensors in the U.S.

SpO₂ probe

\$847 mil
(FY2023)

2018-2023 CAGR: 9%



CO₂ sensor

\$57 mil
(FY2023)

2016-2023 CAGR: 7%



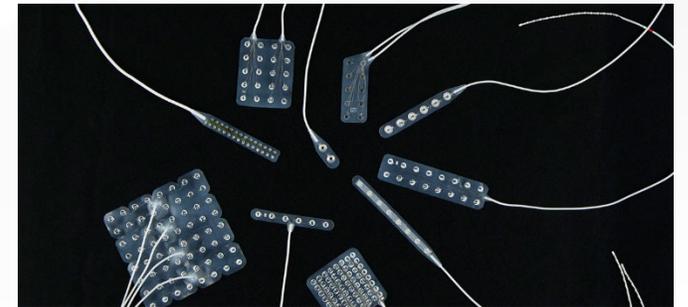
cap-ONE mask

Added

Intracranial electrodes Subdural/depth electrodes

\$40 mil
(FY2023)

2019-2023 CAGR: 8%



* Each of the above data is an estimate made by the Company.

**Raise awareness in the global market
by gaining market share of consumables in the U.S.**

Enhance Recurring Business in the U.S.

SpO₂

- Strengthen the link with sales strategy for patient monitors and transmitters
- Prepare for receiving FDA approval and building clinical evidence for esCCO*

es^{timated}
CCO



EtCO₂

- Increase adoption in a mask-type ventilator, for which the installation base is expanding
- Promote use in the resuscitation field and strengthen offerings of mainstream CO₂ monitoring products
- Prepare for verifying the contribution to safety of anesthesia outside OR

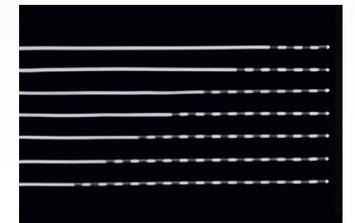


EMG
TOF

- Promote safety and economy of neuromuscular monitoring
- View and manage data for these parameters together with other vital sign data on patient monitors



- Focus on depth electrodes, which are expected to higher market growth
- Create synergies in customer bases of Nihon Kohden and Ad-Tech



Added

Intracranial
electrodes

* esCCO: estimated Continuous Cardiac Output.

**Aim to increase supply of vital sensors in the U.S
by enhancing cooperation b/w Japan and U.S. team**

Synergies Expected in Collaboration with Ad-Tech

- ✓ Aim to expand our market share by strengthening promotions with combination of medical devices and consumables
- ✓ R&D of new products based on hearing customer needs

Non- Nihon Kohden and Ad-Tech product users

Replacement opportunities

- ✓ Collaborative promotion to non- Nihon Kohden and Ad-Tech product users

- ✓ Investigate adopted intracranial electrodes
- ✓ Aim to expand our market share by collaboration between two companies' clinical sales reps

Nihon Kohden product users

Add Value

Ad-Tech product users

- ✓ Investigate adopted EEGs and IONM* devices
- ✓ Aim to expand our market share by collaboration between two companies' clinical sales reps

Disclaimer:

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