

# Ear, Nose and Throat Business Unit (ENTBU) Strategy

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**1. Business Overview**

**2. Recognition of Current Conditions**

**3. Market Trends**

**4. Business Strategies**

**5. Targets and Indicators**

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# Positioning of ENT Business within Olympus

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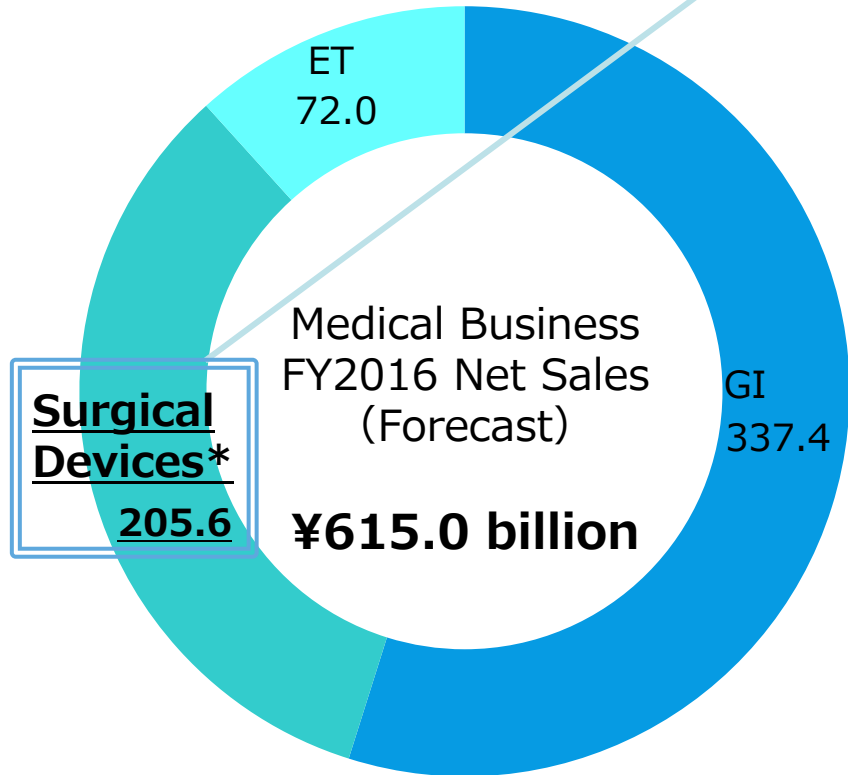
Business with high growth potential and possibility of ongoing expansion to be realized by utilizing Olympus' competencies

Target of business scope expansion using GI and GS technologies

Set to increase earnings capacity through proactive investments strengthening product development and sales networks

# Distribution of Sales and Positioning

## FY2016 Net Sales (Forecast\*)



## Ear, Nose and Throat Business Unit (ENTBU)\*

Laryngology field



Flexible laryngoscopes

Otology field



Vent tubes



Ossicular Chain replacement

Rhinology field



Rigid scopes



Camera heads

Debridors



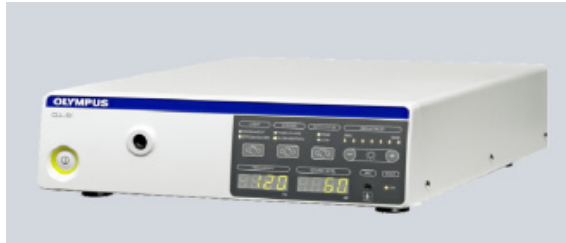
High-frequency ablation systems

Lineup containing major ENT products

\* The figure for Surgical Devices net sales (¥205.6 billion) includes net sales of the Ear, Nose, and Throat Business Unit (ENTBU).

### Major Products

Flexible Laryngoscopes  
e.g.: ENF-VH



### Target Diseases and Applications

Applications: Laryngeal and pharyngeal diagnosis and treatment

- Flexible laryngoscopes are inserted via the nasal cavity to perform examinations in the laryngopharyngeal region, using NBI\* to diagnose malignant tumors and other abnormalities.
- These scopes can examine vocal cord movements in the larynx using strobe lights. In addition, laser probes or forceps can be inserted via the scope channels to remove polyps or cauterize tumors.

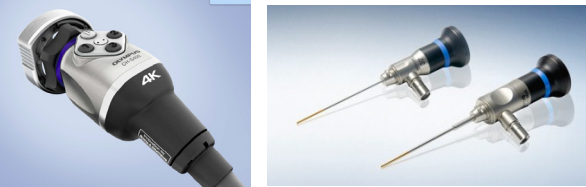
\*NBI : Narrow Band Imaging

### Characteristics

- Olympus scopes help physicians diagnose oropharyngeal, hypopharyngeal and laryngeal cancer.
- Transnasal strobe light examinations using flexible videoscopes are less painful than oral rigid scope examinations and can be conducted with patients assuming a more natural position.

### Major Products

4K Camera Heads  
and Rigid Scopes



DIEGO ELITE




### Target Diseases and Applications

Application: Endoscopic sinus surgery (ESS)



- DIEGO ELITE coupled with direct visualization is used to debride diseased tissue from the sinuses

### Characteristics

- Olympus 4K systems provide high-resolution endoscopic images displaying a wide spectrum of colors
- DIEGO ELITE employs proprietary functions such as declog and high-frequency hemostasis to improve surgical efficiency and shorten surgery times

Major Products	Target Diseases and Applications	Characteristics
<p data-bbox="114 321 547 435">High-frequency ablation systems</p>  A photograph of a high-frequency ablation system. It includes a blue control unit with a digital display and buttons, and two long, thin surgical probes with metal tips. The unit is labeled 'OLYMPUS' and 'Coblation'.	<p data-bbox="649 321 1541 435">Applications: Snoring and sleep apnea syndrome</p> <ul data-bbox="649 492 1656 606" style="list-style-type: none"><li>■ RF Ablation is used to create lesions leading to reduced volume and stiffer tissue.</li></ul>	<ul data-bbox="1719 321 2356 728" style="list-style-type: none"><li>■ Olympus possesses a lineup of various probes that can be used as necessary for reaching different surgery target areas or performing different procedures.</li></ul>



Major Products	Target Diseases and Applications	Characteristics
<p>Vent tubes</p> 	<p>Application: Middle ear infection</p> <ul style="list-style-type: none"> <li>After making an incision in the eardrum, vent tubes are placed to drain effusion.</li> </ul>	<ul style="list-style-type: none"> <li>Olympus provides tubes of varying shapes and sizes to meet the needs of the surgeon and the patient.</li> <li>Special coatings and surface treatments are applied to help prevent blockage within the vent tubes.</li> </ul>
<p>Ossicular Chain replacement</p> 	<p>Application: Hearing impairment treatment surgery</p> <ul style="list-style-type: none"> <li>These implants are designed to repair the ossicular chain in the middle ear.</li> </ul>	<ul style="list-style-type: none"> <li>Olympus offers various implants based on the size and structure of the auditory ossicles to be replaced.</li> </ul>

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# Recognition of Current Conditions

## ■ Review of Medium-Term Vision Period (FY2013~)

Strategy	Measure Progress and Evaluation
Globally develop ENT operations Imaging devices Various treatment devices	◎ <ul style="list-style-type: none"> <li>■ Expanded flexible video laryngoscope operations by utilizing NBI functions that support early diagnosis of oropharyngeal and hypopharyngeal cancer</li> <li>■ Introduced 4K imaging systems and commenced full-fledged participation in rhinology OR imaging business</li> </ul>
	○ <ul style="list-style-type: none"> <li>■ Expanded ESS operations by launching DIEGO ELITE, new product based on one-of-a-kind concept that includes declog function for suction channel and blades equipped with high-frequency hemostasis function</li> </ul>
	○ <ul style="list-style-type: none"> <li>■ Introduced DIEGO ELITE into Japan in 2015 after release in Europe and U.S. and commenced global sales activities in ESS operations</li> <li>■ Bolstered dedicated ENT sales staff and strengthened sales functions in Europe and U.S.</li> </ul>

# Recognition of Current Conditions

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## Tasks

- Utilizing 4K systems and DIEGO ELITE to expand ESS operations
- Realizing ongoing growth in flexible scope operations
- Continually reinforcing global sales systems and extending these activities to emerging countries

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# Market Trends (Japan, U.S. and Europe)

Field	Market Trends (Operating Environment)	Market Scale (Growth Forecasts)	Share*	Competitors
<b>Laryngology</b> <u>Flexible scopes</u>	<ul style="list-style-type: none"> <li>Improved recognition of NBI benefits and rising needs for early diagnosis</li> </ul>	¥15 billion~ ¥17 billion (CAGR:4~5%)	50~ 60%	<ul style="list-style-type: none"> <li>Hoya</li> </ul>
<b>Rhinology</b>	<u>ESS imaging</u>	<ul style="list-style-type: none"> <li>Increased needs for high-resolution, wide-color-spectrum images through HD and 4K systems</li> </ul>	Less than 1%	<ul style="list-style-type: none"> <li>Karl Storz</li> </ul>
	<u>ESS debridors</u>	<ul style="list-style-type: none"> <li>Sinusitis surgeries and procedures using debridors commonplace in developed countries</li> <li>Healthcare economics in US driving some procedures to alternative site of care.</li> </ul>	10~ 15%	<ul style="list-style-type: none"> <li>Medtronic</li> </ul>
<b>Otology</b> <u>Implants and vent tubes</u>	<ul style="list-style-type: none"> <li>Slight increase in illness case numbers and procedure numbers</li> </ul>	¥5 billion~ ¥7 billion (CAGR:Less than 1%)	40~ 50%	<ul style="list-style-type: none"> <li>Medtronic</li> </ul>

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# Business Strategies

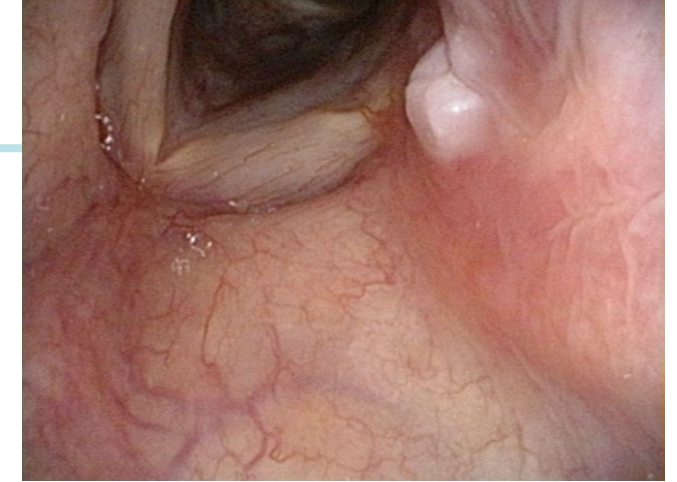
Laryngology	1	■ <b>Expand ENT flexible endoscope operations centered on “videonization”</b>
Rhinology	2	■ <b>Acquire endoscopic sinus surgery (ESS) operations</b> <ul style="list-style-type: none"><li>◆ Expand sinus surgery imaging operations centered on 4K systems</li><li>◆ Expand sinus surgery product portfolio centered on DIEGO ELITE</li><li>◆ Implement measures in preparation for introduction of minimally invasive treatments into alternate sites of care</li></ul>
Overall	3	■ <b>Establish global sales systems</b>



# Expand ENT flexible endoscope operations centered on “videonization”

## Differentiate by soliciting benefits of NBI

- Acquire clinical evidence on medical efficacy of NBI
  - Possible utility for ensuring surgical margin of surgery for laryngeal and pharyngeal cancer
  - Possible utility for improving detection ratios of laryngeal and pharyngeal cancer
- Advance activities to achieve insurance reimbursement listing for NBI

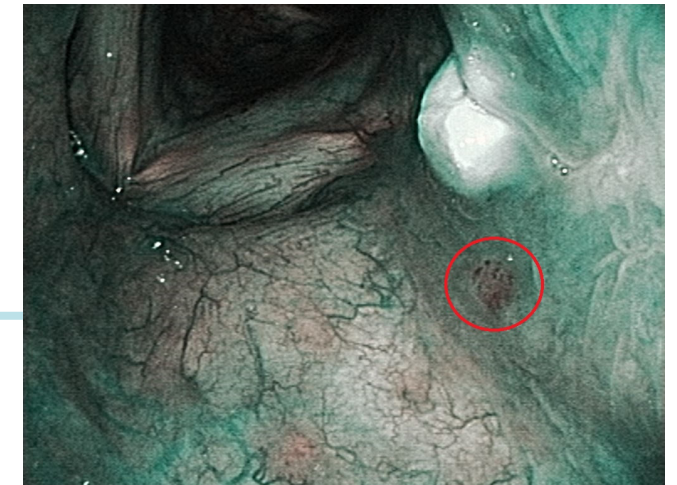


## Promote shift from fiberscopes to videoscopes

- Focus on NBI technologies and other high-value-added product lines that can be differentiated  
<Ratio of “videonization”>

U.S.: 50% → 60~70%

Europe: 20% → 50~60%



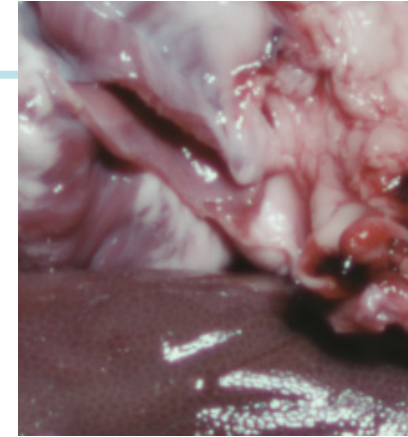
**Petr Lukes, M.D., Ph.D.**

First Faculty of Medicine, Charles University in Prague and University Hospital Motol

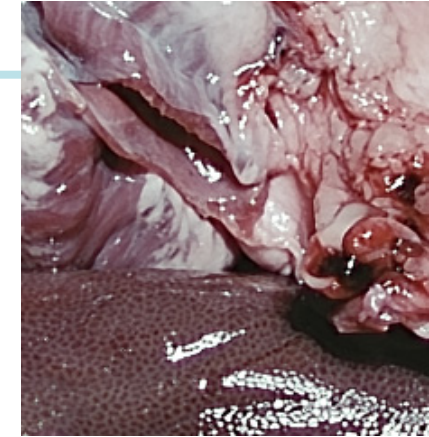
# Acquire endoscopic sinus surgery (ESS) operations

## Expand sinus surgery imaging operations centered on 4K systems

- Expand ENT OR imaging operations by utilizing 4K systems
  - **High-resolution images**  
Simplification of procedures through improved visibility realized by 4K resolution
  - **Natural color reproduction due to wide color spectrum**  
Ability to select color reproduction settings based on ENT application



**HD Image**



**4K Image**

\* This images are for illustration purposes

## Expand sinus surgery product portfolio centered on DIEGO ELITE

- Expand ESS operations by providing “See (4K) & Treat (DIEGO ELITE)” solutions that combine tissue declog removal, high-frequency hemostasis, and other differentiated functions, with 4K imaging
- Periodically introduce new products into lineup to optimize ESS systems

# Acquire endoscopic sinus surgery (ESS) operations

## DIEGO ELITE



# Establish global sales systems

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## Commence full-fledged development of ESS operations in Japan and Europe

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- Enhance sales capabilities by assembling dedicated ESS sales forces
- Proactively introduce successful measures from U.S. market into other markets

## Step up development of ENT operations in Asia Pacific

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- Define target countries (China, Australia, Singapore, etc.) and establish dedicated sales forces
- Pursue phased expansion of market coverage centered on target countries

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# Targets and Indicators

1	Net sales CAGR	■ 13%
2	Field	
	Laryngology <u>Flexible scopes</u>	■ Maintain dominant No. 1 share by pursuing even higher levels of product and service value
	Rhinology	
	<u>ESS imaging</u>	■ Start up ESS imaging business and achieve market share of more than 10%
	<u>ESS debriders</u>	■ Expand ESS treatment business and achieve market share of more than 20%

**OLYMPUS**

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