Endoscopy Unit at SMC

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# Endoscopy rooms and instruments

<table>
<thead>
<tr>
<th></th>
<th>Main Building</th>
<th>Cancer Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endoscopy Room</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>Endoscope</td>
<td>18</td>
<td>10</td>
</tr>
<tr>
<td>Video System</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scope</td>
<td>110</td>
<td>80</td>
</tr>
<tr>
<td>Disinfection System</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>GI Motility Unit</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
# Volume of examinations (2015)

<table>
<thead>
<tr>
<th>Location</th>
<th>Main (14 beds)</th>
<th>Cancer Center (8 beds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper endoscopy</td>
<td>105</td>
<td>59</td>
</tr>
<tr>
<td>Upper endoscopy / bed</td>
<td>7.5</td>
<td>8.7</td>
</tr>
<tr>
<td>Lower endoscopy</td>
<td>46</td>
<td>24</td>
</tr>
<tr>
<td>Lower endoscopy / bed</td>
<td>3.6</td>
<td>3.5</td>
</tr>
<tr>
<td>Therapeutic endoscopy</td>
<td>17</td>
<td>20</td>
</tr>
<tr>
<td>Therapeutic endoscopy / bed</td>
<td>2.2</td>
<td>2.9</td>
</tr>
<tr>
<td>Total endoscopic examinations</td>
<td>168</td>
<td>103</td>
</tr>
</tbody>
</table>
Floor plan
- Endoscopy unit, SMC Cancer Center
Endoscopy rooms
Protocol for endoscopic sedation

<table>
<thead>
<tr>
<th>Condition</th>
<th>Midazolam</th>
<th>Pethidine</th>
</tr>
</thead>
<tbody>
<tr>
<td>If BW &lt; 60kg or Age ≥ 70yrs</td>
<td>1 mg</td>
<td>25 mg</td>
</tr>
<tr>
<td>If BW ≥ 60kg and Age &lt; 70yrs</td>
<td>2 mg</td>
<td>50 mg</td>
</tr>
</tbody>
</table>

Additional dose

1. Midazolam 0.5 mg or 1 mg
2. Pethidine 25 mg

→ 1 or 2 at intervals of 1-2 minutes

- 약성 진동증을 사용중인 환자의 경우, pethidine은 투약하지 않거나 용량을 감량하여 조심스럽게 투약한다.
- 이전에 본원에서 진정내시경을 시행받은 기원력이 있는 환자의 경우는, midazolam의 initial dose를 (이전 induction용량 - 1)mg으로 시작할 수 있다.

(개정 2014.10.16)
Recovery space
Treatment of gastric cancer at SMC

- **Surgery**
- **ESD**

Year | Surgery | ESD
--- | --- | ---
2007 | 887 | 233
2008 | 1,607 | 332
2009 | 1,586 | 407
2010 | 1,568 | 442
2011 | 1,658 | 782
2012 | 1,561 | 771
2013 | 1,604 | 777
2014 | 1,547 | 980
2015 | 1,299 | 731
2016 | 1,532 | 813
Endoscopy training at SMC

Jun Haeng Lee. SKKUSOM
Old style

2-3 observations at endoscopy room

Insertion

SMC style

Box simulator training (BOXIM)

Description exercise (DEX)

Book reading, EndoTODAY

Clinical observation

Procedure with supervision

CEE (off-line & on-line)
To become an independent endoscopist, 3 month full-time training is required.

<table>
<thead>
<tr>
<th>Program</th>
<th>1st month</th>
<th>2nd month</th>
<th>3rd month</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-line lecture</td>
<td></td>
<td><strong>KSGE lectures 1-10</strong></td>
<td><strong>KSGE lectures 11-20</strong></td>
</tr>
<tr>
<td>Staff lecture</td>
<td>(1) <strong>Insertion</strong></td>
<td><strong>One point lesson</strong></td>
<td><strong>One point lesson</strong></td>
</tr>
<tr>
<td></td>
<td>(2) <strong>Description</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3) Common GI disorders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Book &amp; Journal club</td>
<td>Textbook reading with tutors</td>
<td>Review the review</td>
<td>Review the review</td>
</tr>
<tr>
<td>Description training</td>
<td>1, 2, 3, 4</td>
<td><strong>5, 6, 7, 8</strong></td>
<td><strong>9, 10, 11, 12</strong></td>
</tr>
<tr>
<td>Gastric cancers 1,000</td>
<td><strong>Season 1</strong></td>
<td><strong>Season 2</strong></td>
<td><strong>Season 3</strong></td>
</tr>
<tr>
<td>Weekly conference</td>
<td><strong>Endoscopy conference</strong></td>
<td><strong>Endoscopy conference</strong></td>
<td><strong>Endoscopy conference</strong></td>
</tr>
<tr>
<td></td>
<td><strong>GI conference</strong></td>
<td><strong>GI conference</strong></td>
<td><strong>GI conference</strong></td>
</tr>
<tr>
<td>Observation and hands-on</td>
<td>Weekly observation</td>
<td>Daily observation</td>
<td>Hands-on</td>
</tr>
<tr>
<td></td>
<td><strong>Simulator training</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td><strong>EndoTODAY</strong></td>
<td><strong>EndoTODAY</strong></td>
<td><strong>EndoTODAY</strong></td>
</tr>
<tr>
<td></td>
<td>Topic presentation 1, 2, 3</td>
<td>Topic presentation 4, 5, 6</td>
<td>Topic presentation 7, 8, 9, Quiz 365</td>
</tr>
</tbody>
</table>
Box simulator (BOXIM) training and description exercise (DEX)
EndoTODAY – webpage and blog

1. Beginner course - Boxim, DEX, Terminology, Classification, Reference
2. EndoTODAY update
3. EndoATLAS index
4. Conferences - Thursday, KSGE, KSDE, KINGCA, Hp, Japan, Monday
5. Cases - Esophagus, GERD, Stomach, Gastric cancer, Ulcer, Small, Colon, Liver
6. Endoscopy Unit - Visiting SMCDE, ESD nursing
7. Description exercise workshop

1. Introduction
2. Program overview
3. Endoscopy box simulator training (Boxim, 박심)
4. Description exercise (Dex, 닥스)
5. Sedation and safety
6. Staff lectures
7. Book reading
8. Topic presentation
9. Colonoscopy techniques
10. Technical tips
11. Special - 위암 1,000
12. Continuous endoscopy education (CEE)
13. References

2018년 5월 7일 월요일
ESD 후 SM1 invasion으로 나온 환자에게 어떻게 설명할 것인가?
(2015)
SM1 invasion을 보인 조기위암의 내시경치료에 논란이 있습니다. 분화조직형이, 2cm 미만, lymphatic (-)라면 SM1 cancer는 ESD 후 추가 수술 없이 경과관찰을 하는 경우가 많습니다. 그러나 ESD 후 extraga...

2018년 5월 6일 일요일
용기형 조기위암 1예
이 정도 용기형 암이면 EGC type이라고 해도 무방할 것 같습니다. 어떠한 병리과정에서는 Ila라고 말하였습니다. Stomach, ESD: Early gastric carcinoma 1. Location: body, lesser...

2018년 5월 5일 토요일
전반 위내시경 시대의 질병가와 training
Thursday endoscopy conference
Web-seminar (since 2015. 3.)
ESD training using pig stomach model
Learning Endoscopy at SMC

BOXIM

DEX

On-line
EndoTODAY

Off-line
Lectures
and seminars
Open education

Specialists only

Any doctor
Box simulator training

(BOXIM)

Jun Haeng Lee. SKKUSOM
First BOXIM training at SMC
What kind of simulator?
Simulator training corner (1 unit)
Simulator training room (4 units)
Best quality instruments for beginners
- Rental endoscopy systems (Pentax Imagina)
Home-made biopsy training module
BOXIM program

- 9:00-9:20 Lecture 1 - Learning EGD skills
- 9:20-10:20 Hands-on training 1
- 10:30-10:40 Lecture 2 – Ergonomics. Inserting the endoscopes
- 10:40-11:40 Hands-on training 2
- 11:40-12:00 Lecture 3 – Making records
- 12:00-13:00 Self training
Two finger method: Endoscope is unstable and the forearm is painful.

Three finger method: Endoscope is quite stable and there is no forearm pain.
Manuals are available at endotoday.com
Hands-on training 1: 내시경 삽입법 훈련
H-school

DEX

BOXIM

Col

BOXIM

AUS
Unique learning experiences