色1: Endoscopic finding of epistaxis of middle nasal concha.
色2: Gastric cancer (M, Post, 0–IIa, T1, 5 × 7 mm, tub 2).

色1: Endoscopic submucosal dissection (ESD) using a “two-channel endoscope method”. A lateral spreading tumor (LST) of the ascending colon (a). After cutting around the tumor, grasping forceps tracts the edge of the lesion for widening the cutting area (b). Vertical traction enables a safe dissection of the lesion using a hook knife (c). The lesion was an early cancer, not invasive, 34mm in diameter (d).

色2: ESD using a “thread–traction method”. Precutting the mucosa around the LST of the ascending colon (a). Clipping device with a thread is fixed on the edge of the lesion (b). Another side of the thread is fixed to the opposite side of colon, enabled to keep the safety area for dissection (c). Early cancer of the colon, 25mm in diameter was completely removed with this method (d).

色1: Endoscopic findings of distal end of esophagus.
a: normal  b: GERD grade M (red).

色2: Nework pattern of color chart.
**Clinical Study**

**Kangaroo kit**
A catheter completely covered with over-tube.

**Over-tubes used with one-step button.**

---

**Clinical Study**

**Normal bile duct**
(Fiber vascular network was revealed with NBI system.

**IPMN**
(Left: conventional, Right: NBI)

**Bile duct cancer**
(Left: conventional, Right: NBI)
Irregular mucosa and abnormal vessels were seen with NBI system.

**Fiber vascular network**
Also revealed with NBI system and the spreading of papillary mucosa into the main pancreatic duct was defected as a brown mucosa.

**Bile duct stone**
(Left: conventional, Right: NBI)
**Color 1** Endoscopic image showed a polypoid tumor with pigmentation in the middle esophagus. The surface of the tumor was with erosions and with depression.

**Color 2** Magnified endoscopy showed a regular intra-epithelial papillary capillary loop.

**Color 3** The finding of endoscopic ultra sound demonstrates that a high echoic tumor has invaded the submucosal layer and color Doppler showed hyper vascular in the tumor.

**Color 4** Positron emission tomography showed a tumor of esophagus and no metastasis. (++)

**Color 5** A large en bloc resection of 50 mm in size was possible and no perforation. Polypoid tumor was 45 x 20 x 15mm.

**Color 6-a,b** 6-a: depth sm, v (+), ly (-), cut end (-) (HE x 100) Histological finding of a specimen showed spindle type of tumor cells with melanin pigments. 6-b: Junctional activity was seen.

**Color 7** Immunohistochemical staining of atypical cells shows HMB-45-positive (a), and the final diagnosis was malignant melanoma.

---

**Color 1** Shape of the prototype sent.

**Color 2** An endoscopic image immediately after placement of the sent : A case of usage in combination with a 7-Fr biliary sent. The pancreatic outflow can be identified.

---

**Color 1** Endoscopic findings showed severe stenosis around White elevated lesion.

**Color 2** Endoscopic findings showed severe Candida esophagitis.
**Case 1**  Endoscopic view of the residual esophagus at 6 years and 3 months after esophagectomy. It revealed severe esophagitis.

**Case 2**  Endoscopic view of the reconstructed gastric tube and Histopathological examination (×40) showed chronic gastritis with intestinal metaplasia.

**Case 3**  At 9 years and 8 months after the esophagectomy, CLE appeared in circumference on the anastomosis.

**Case 4**  Histopathological examination of Biopsy (×40). It is recognized some cardiac glands and a few squamous cell epithelium.

**Case 5**  Histopathological examination of Biopsy (×100) showed many cardiac glands and some torn muscle fiber.

**Case 1**  Endoscopic finding shows irregular shaped multiple ulcers with white coated surface and hemorrhage in the lower part of the corpus through the pyloric antrum.

**Case 2**  Immunohistochemical findings show spiral brown–colored TP in the gastric mucosa.

**Case 1**  Endoscopic view of stomach before eradication of *Helicobacter pylori*. It showed enlarged folds with rich mucus on greater curvature of corps.

**Case 2**  The specimen form greater curvature showed markedly hypertrophic change of epithelium in foveola region and mildly infiltration with eosinophils in fundic gland.

**Case 3**  The endoscopic examination was taken 11 weeks after eradication of Helicobacter pylori. It revealed improvement of enlarged folds and normalized surface of mucosa.

**Case 1, 2**  Endoscopic findings showed a bezoar and gastric ulcer
**Case 1:** Endoscopic picture showing brownish remnants in the stomach.
**Color 2:** Endoscopic picture showing many convergent gastric folds beside the cardia.

**Case 2:**
**Color 1:** Endoscopic view of bleeding varix.
**Color 2:** Endoscopic view in endoscopic injection sclerotherapy.
**Color 3:** Endoscopic view of esophageal varices (LmF 2 CbRC(+))
**Color 4:** Endoscopic view of ulceration following sclerotherapy.

**Case 3:**
**Color 1:** 1 a) Endoscopic findings show gastric varices with nodular beaded appearance of the greater curvature from the upper to the middle gastric body.
1 b) Oozing bleeding on admission
**Color 2:** Endoscopic ultrasonography showed treated gastric varices after the endoscopic sclerotherapy.

**Case 4:**
**Color 1:** Endoscopic view of the tumor like type 2
**Color 2:** Pathological finding (HE staining)
**症例 横畠德祐，他论文**

<本文82頁－83頁>

**Color 1**  case 1  a) Marks are put on the surface of the tumor. b) mucosa incision was made with hook knife. c) after biopsy performed, cutting line was closed to prevent the exposure of tumor with clips.  
**Color 2**  case 2  a) biopsy with mucosa incision was carried out. b) after biopsy performed, the cutting line was closed with clips.

---

**症例 伊藤紗代，他论文**

<本文84頁－85頁>

**Color 1** Endoscopic findings shows a solitary pedunculated submucosal tumor, approximately 20 mm in diameter, on the anterior wall of the middle body.  
**Color 2-a** In 1994, endoscopic findings shows Yamada's type Ⅲ elevated lesion, approximately 5 mm in diameter.  
**Color 2-b** In 2000, the size of the lesion was approximately 10 mm in diameter.

---

**症例 新井勝春，他论文**

<本文86頁－87頁>

**Color 1** Endoscopic picture shows multiple small ulcerations on the greater curvature of the gastric lower body.  
**Color 2** Endoscopic picture shows depressed lesion on the greater curvature of the gastric lower body with indigo-carmine.  
**Color 3** Endoscopic picture shows depressed lesion with erosion on the greater curvature of the gastric lower body after the eradication therapy of Helicobacter pylori.  
**Color 4** Endoscopic picture shows depressed lesion with erosion on the greater curvature of the gastric lower body after the eradication therapy of Helicobacter pylori with indigo-carmine.  
**Color 5** Macroscopic finding of the stomach shows ⅡC lesion on the greater curvature posterior wall of the gastric lower body.  
**Color 6** Macroscopic finding shows moderately differentiated adenocarcinoma with ulcer scar.
症例 岸 大輔，他論文
＜本文88頁－89頁＞

Color 1  The polyp had small nodule which had irregular surface.
Color 2  Resected specimen

Color 3  Loupe view

症例 水野芳枝，他論文
＜本文90頁－91頁＞

Color 1  Endoscopic view showed a IIa lesion on the posterior wall of the lower gastric body.

症例 平畑光一，他論文
＜本文94頁－95頁＞

Color 1  Endoscopic view of descending duodenum. Erosion or ulcers were observed surrounded by redness and edematous mucosa.
Color 2  Endoscopic view of descending duodenum after 13 days from initiation of providing nutrition from gastric feeding tube. Hemorrhagic erosion or ulcers were observed again. Scars were also observed.

症例 小田木勳，他論文
＜本文96頁－97頁＞

Color 1-a  Endoscopic view showing hemorrhage from the duodenum. The definite bleeding source was not detected.
Color 1-b  The bleeding vessel in the duodenal diverticulum was observed by an endoscope with a transparent hood on its top.
Color 2-a  The endoscopic clipping method with a transparent hood was performed for the bleeding point in the duodenal diverticulum.
Color 2-b  Endoscopic view of the duodenal diverticulum 4 days after endoscopic treatment.
### 症例 山崎将人，他論文
＜本文98頁－99頁＞

**Color 1** An initial image of the ampulla of Vater. The papillary tumor was shown around the orifice.

**Color 2** Endoscopic images of the ampulla of Vater. The papillary tumor around the orifice shows no significant changes but a little bit diminishing in size.

![color_images]

### 症例 大山徳成，他論文
＜本文102頁－103頁＞

**Color 1** Formalin fixation specimen of *Taenia* saginata expelled by Gastrografin treatment.

**Color 2** Scolex of *Taenia* saginata. It has four suckers, and neither rostellum nor hooks.

![color_images]

### 症例 吉村美保，他論文
＜本文104頁－105頁＞

**Color 1** Endoscopic view of the jejunum.

**Color 2** Specimen showed c–kit positive, MIB-1 LI 10%

![color_images]

### 症例 高林英日己，他論文
＜本文106頁－107頁＞

**Color 1** PET picture of the whole body. The PET showed hot spots in left lobe of the thymus, stomach, near the ascending colon and near the sigmoid colon. Especially strong hot spot was recognized in near the ascending colon.

**Color 2** Colonoscopic finding. The colonoscopic finding showed multiple nodular elevations and cobblestone appearance around the orifice of the appendix.

![color_images]
Color 1  Endoscopic findings: (a) Clasp of the denture (white arrow) was impacted in colon mucosa. (b) A severe ulceration was revealed in the part of the incarcerated denture.

Color 1  Colonoscopic findings show an area of hemorrhage, erosion and multiple ulcers in the descending colon.
Color 2  Histopathological findings show necrosis and inflammatory cellular infiltration. Note the normal mucosa around the ulcer.

Color 1  Endoscopic view of ascending colon shows a type I s tumor. (December, 2005)
Color 2  Endoscopic view of ascending colon shows a type II a + II c lesion. (June, 2006)

Color 1-a  Colonoscopic view of splenic flexure showing diffuse erythema with erosion and loss of fine vascular pattern.
Color 1-b  Colonoscopic view of descending colon showing normal mucosal appearance.
Color 1-c  Colonoscopic view of rectum showing normal mucosal appearance.

Color 2-a  Colonoscopic view of splenic flexure showing diffusely inflamed mucosa exacerbated compared with the initial colonoscopy.
Color 2-b  Colonoscopic view of descending colon showing diffuse inflammation such as erythema and loss of fine vascular pattern appeared.
Color 2-c  Colonoscopic view of rectum showing opacity of fine vascular pattern appeared.
Symptom: The gastric folds were markedly enlarged and the gastric mucosa was severely reddish and edematous. The carpet-like sessile polyps were seen in the antrum.

Color 1: The enlarged gastric folds were improved. The carpet-like sessile polyps were still seen in the body and antrum. There were 4 large polyps in the body, which were also hyperplastic ones.

Symptom: Endoscopic view of the Vater’s papilla and juxtapapillary diverticulum with food residue (arrow).

Color 1: Endoscopic view of the separated orifice of common bile duct (arrow) inside the juxtapapillary diverticulum.

Symptom: Duodenoscopy showed the orifice of the duodenal papilla was normal. Defluxion of mucus from the main papilla was not identified.

Color 1: Pathological finding of the surgical specimen revealed an approximately 3mm IPMN within the pancreatic duct at the body of the pancreas.