Color 1 Changes in the endoscopic findings after phenol red staining. Endoscopic findings before and after phenol red spraying.

Color 1 Gastric cancer (type IIc) was seen at the posterior wall of the antrum. The indigocarmine staining was not useful to detect the margin of the lesion.

Color 2 Six months later, post endoscopic resection scar was seen at the lesser curvature of the antrum. No malignant sign was found at the lesion.

Color 1 Initial endoscopic findings of Case 15 is shown before endoscopic mucosal resection. Macroscopic type was classified as nodular type of laterally spreading tumor. Pathological examination after endoscopic resection revealed well-differentiated sm, adenocarcinoma.

Color 2 Endoscopic findings of 16 months after endoscopic mucosal resection. Reddened depressed area with fold conversion was identified. Biopsy specimens revealed well-differentiated adenocarcinoma.

Color 3 In stereoscopic findings, type V pit pattern was recognized in the depressed area. Histologically this lesion was diagnosed as well-differentiated sm, adenocarcinoma.
Color 1  A: Endoscopic view of IIC type cancer at the lesser curvature of the antrum of the stomach before EMR as primary treatment.  B: Dye endoscopic view of a shallow depressed and reddish mucosa unstained with indigocarmine.  C: EUS image of the cancerous invading to “m”.  D: Microscopic view of the biopsy specimen, well differentiated tubular adenocarcinoma.

Color 2  A: Endoscopic view of the reoccurred cancer on the anal side of the scar after 2 years of EMR (Same case as Color 1).  B: Dye endoscopic view of a shallow depressed and reddish mucosa unstained with methylene blue.  C: Endoscopic picture view of the spots were marked by heater probe surrounding the reoccurred cancer.  D: Endoscopic view of the treatment for the reoccurred cancer by re-EMR.

Color 3  A: Endoscopic view of IIa type cancer at the posterior wall of the lower body of the stomach.  B: Dye endoscopic view of a short elevated lesion with indigocarmine.  C: EUS image of the cancerous invasion to “m”.  D: Microscopic view of the resected specimen showing well differentiated tubular adenocarcinoma extending to the margin.

Color 1  A: Endoscopic finding showing rectal polyp (ls). B: The resected specimen by TEM was 30mm×28mm in size. C: EUS revealed mucosal invasion of rectal polyp. D: Histology showed well differentiated adenocarcinoma with mucosal invasion.

Color 2  A・B: Endoscopic finding showing early rectal cancer (Rb, IIc type). C: The resected specimen by TEM was 48mm×41mm in size and tumor size was 19mm×17mm. D: Histologic finding was well differentiated adenocarcinoma with smʃ, ly1, v1.

Color 3  A: Endoscopic finding showing rectal polyp (ls). B: The resected specimen by TEM was 25mm×25mm in size. C: EUS revealed submucosal invasion of rectal polyp. D: Histologic finding was moderately differentiated adenocarcinoma with smʃ, ly1, v1.
Color 1  Hepatocellular carcinoma recognized liver surface of the left lobe.  
A: Initial laparoscopy (pre-ethanol injection therapy).  
B: Laparoscopic finding at the time of 1 year and 5 months after ethanol injection.

Color 2  Hepatocellular carcinoma on region S.  
A: Initial laparoscopy (pre-ethanol injection therapy).  
B: Laparoscopic finding immediately after ethanol injection therapy.

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Color 1  Carcinoma of the head of the pancreas.  
A: It was enclosed by the duodenal loop. The tumor was an irregular whitish mass. Slightly distended blood vessels were observed on the surface of the tumor.  
B: On cytodiagnostic biopsy of this case, infiltration of the atypical cells was seen.

Color 2  Carcinoma of the body and tail of the pancreas.  
A: Remarkable collateral vessels can be around the tumor.  
B: When the lesser omentum was incised, the pancreas was observed through the incision.  
C: In addition, when the scope was passed into the lesser peritoneal sac, a whitish tumor of the pancreas was observed.  
D: On pancreatic tissue biopsy, infiltration of carcinoma cells was seen.
Color 1  Twenty-four hour pH monitoring in the lower esophagus before and after anti-reflux operation. 24 hour pH monitoring of lower esophagus showed preoperative acid GER (red) and postoperative good condition (pink).

Color 2  A case of laparoscopic Nissen fundoplication.

Color 1  アルゴンプラズマ凝固の原理。
Color 2  大腸EMR後の病変からの出血例に対してAPCで凝固止血を行った。

Color 1  Endoscopic findings 3 days after EIS showing submucosal hematoma.
Color 2  Endoscopic findings 5 days after EIS showing that the mucosa over the hematoma was broken out.

Color 1: A flat type lesion of which configure is not totally visualized, because large folds hide a part of the lesion. B: The same lesion after injecting saline in the submucosa. The lesion proves to have a central depression, and it was a lesion with suitable configuration for EMR.
Color 2: A flat type lesion with a shallow depression which is about 25 mm in size. It is difficult to snare this lesion at one time. B: The same lesion at the time of injecting saline in the lesion directly. With this procedure, the lesion changed to have an appropriate configuration for en bloc EMR.
Color 1 The LST type lesion was noted over the fold of sigmoid colon, 30mm in diameter. Intentional piecemeal resection was performed.

Color 2 The residual lesion after two times of piecemeal resection was snared again in the cap with endoscopic suction.

Color 3 The lesion was resected completely by third piecemeal resection.

Color 1 Endoscopic examination showing smooth and erythematous mucosa in the whole 38cm distal from the upper incisor. And the protruded lesion with an irregular surface surrounded by erythematous mucosa.

Color 2 Endoscopic examination showing that erythematous mucosa and the protruded lesion were unstained by iodine spraying.

Color 3 Operated specimen shows a superficial and protruding type lesion (5×3.3cm) surrounded erythematous epithelium.

Color 1 Endoscopic finding: The tumor was smooth elevated lesion with bridging fold of gastric antrum and was colored as same as other normal mucosa.

Color 2 Histological finding: The tumor was composed of blood vessels lined by normal endothelial cells (A) and surrounded by sheets of uniform (B), round to oval glomus cells without atypia (C).
**Color 1** Chromoscopy with indigocarmine dye shows granular pattern of the mucosa with erosion.
**Color 2** A: Endoscopic picture. B: Infrared-ray electronic endoscopic picture reveals round pooling findings around the tumor (arrow).
**Color 3** The resected gastric specimen fixed with formaldehyde shows the granular mucosal pattern on the anterior wall of the gastric body. Yellow lines indicate intramucosal lesions and red lines indicate submucosal lesions.

**Color 1** Endoscopic findings of the small sessile polypoid lesions in the upper (A) and middle (B) body of the stomach. **Color 2** Histological appearances of biopsied specimen of the gastric polypoid lesion. A: A part of carcinoid tumor located in the deep lamina propria of the mucosa (HE stain). B: Tumor cells are almost uniform with small nuclei and arranged in trabecular pattern (HE stain). C: Grimelius stain shows argyrophilic granules in carcinoid cells (Grimelius stain). D: Tumor cells showed immunoreactivity for Chromogranin-A (Chromogranin-A stain).
Color 1  Endoscopic examination under condition of enough amount of air supply. Red spotty area with pale halo was observed in the lower body. This lesion resembled “hino-maru” type gastric angiodysplasia.

Color 2  Endoscopic examination under condition of small amount of air supply. Small depressed lesion with fold convergency was seen. A small red granule was observed in the center of lesion. This lesion was diagnosed Iic type early gastric carcinoma endoscopically.

Color 3  Image analysis of angiodysplasia (A) and Iic type early gastric carcinoma (B).

Color 1 A: Endoscopic picture shows a lobulated polypoid lesion with a fine granular surface. B: A discolored flat elevated lesion is seen near the larger tumor.

Color 2  The resected stomach shows large, cauliflower like processes in the gastric angle. The gross finding of the tumor is characteristic of the villous tumor which was $10 \times 5 \times 3$ cm in size. Additionally, a smaller lesion is observed adjacent to the larger cauliflower like tumor.

Color 3 A: The cross section of the larger lesion. B: Microscopically, the larger tumor is consisted of well differentiated adenomatous epithelium with a villous pattern.
**Color 1** Colonoscopic examination revealed multiple erosions and small ulcers with mucosal edema in the terminal ileum.

**Color 2** A: The resected specimen showed multiple ulcers. B: The resected specimen showed 3 sites of perforation (arrows).

**Color 1** Colonoscopic findings showing like a Ha+IIc type lesion.

**Color 2** Schema of the resected specimen of sigmoid colon. In No. 4 and No. 7, the depth of infiltration showing suberosal layer.

**Color 1** Endoscopic examination showed a tumor of approximately 6cm in diameter with necrotic lesion, protruding from the anterior wall of the rectum.

**Color 2** Histological findings showed an interlace pattern, which is often found in leiomyosarcoma.

Color 2  Upper part (A + B) of this colonoscopic picture on May 23, 1996 shows that broad rectal mucosal necrosis was significantly improved. Lower part (C + D) of this picture on Aug 1, 1996 shows almost normal rectal mucosa and slightly narrowing of the lumen. A+C: upper part of rectum. B+D: lower part of rectum.

Color 1  Colonoscopy showed a huge villous tumor covered with a lot of mucus.

Color 2  A villous projection of the tumor surface was confirmed by magnifying observation.

Color 3  Macroscopic view of the resected specimen revealed a huge rectal tumor with numerous villous projection, 17×9.5cm in size.
症例
川村直弘ほか論文
（本文218～221p）

Color 1 Initial laparoscopic examination.
Color 2 The 2nd laparoscopic examination.

臨床研究
祖山暁子ほか論文
（本文222～223p）

Color 1 Endoscopic picture shows an artificial tooth with a rice cake in the upper esophagus.

臨床研究
白石 好ほか論文
（本文224～225p）

Color 1 Before stent implantation in Case 4.
Color 2 After stent implantation in Case 4.

臨床研究
蜂巢 忠ほか論文
（本文226～227p）

Color 1 Two clips had been remained in the stomach, and were removed in order to examine MRI.
Color 2 Oozing bleeding started after clips removal.

臨床研究
影山 裕ほか論文
（本文232～233p）

Color 1 Endoscopic picture of the case with the superficial type observed for 4 years and 3 months. A: At the first time of the endoscopy, multiple ulcers or erosions were found the anterior wall of the angulus. B: Before the operation, the lesion was pale and extended.
Color 1 A tiny redness, irregularly-shaped and vaguely surrounded by elevation was discerned in the cardia site, only upon close scrutiny, along the lesser curvature close to the posterior wall. The lesion, if not dyed, would have been extremely difficult to notice to the naked eye. Removed by EMR. Diagnosed as Type-IIc, 5.3mm, m and tub.

Color 2 A flat-topped elevation revealing nodular surface was present in the cardia. Chrysanthemum apperance was visualized with indigocarmine dying, followed by surgical partial resection. Diagnosed as Type-IIa, 20×20mm, sm, and tub.

Color 1 Duodenal papilla is dilated by EPB.

Color 2 After EPBD, generally small amount of oozing occurs.
Color 1  A: Endoscopic picture shows the protruded polyp with an erosion on its top at the lower esophagus. B: Endoscopic picture shows the polyp surrounded and tightened at the base with a loop using detachable snare.

Color 2  A: Endoscopic picture shows the ulcer with detachable snare ligation. B: Endoscopic picture shows the lineal ulcer scar at lower esophagus.

Color 1  Endoscopic study revealed a round protruding tumor arose from lower thoracic esophagus.

Color 1  Endoscopic view of submucosal hematoma 4 days after EIS.
Color 2  Submucosal hematoma shows swelling and oozing hemorrhage 11 days after EIS.
Color 3  Five clips were applied to the submucosal hematoma.
Color 4  Submucosal hematoma has disappeared and a deep ulcer is observed 4 days after clipping.
Color 1  A: Endoscopic finding shows Mallory-Weiss tear.  B: Endoscopic finding shows O-ring ligation of tear on lesser curvature.

Color 2  Endoscopic finding 3 days after treatment.

Color 3  Endoscopic finding 14 days after treatment.

Color 1  A: On pre-medication endoscopic picture shows multiple cherry-red spots characterized angiodyplasia.  B: After local injection of pure ethanol, these lesions were disappeared.  C: After a systematic hormonal therapy, these lesions did not worsen.

Color 2  A-B: Endoscopic findings showed dilated vessels in sigmoid colon.
Color 1. Endoscopic examination revealed a larva of Anisakis penetrating the gastric mucosa associated with an irregular ulcer (May 18th, 1996).

Color 2. Endoscopic examination showed massive blood and coagula in the stomach and a broken vessel in the bottom of the ulcer (May 23rd, 1996).

Color 3. Endoscopic finding showed the ulcer was healed after a month of clipping hemostasis.

Color 1. Endoscopic findings on 7 years after the start of hemodialysis. Multiple erosions were seen in the antrum.

Color 2. Flowing bleeding from a gastric elevated erosion in the antrum.

Color 1. A: Endoscopic findings before therapy showing that gastric varix was located at the fornix. B: Endoscopic findings just after EVL showing that the varix was ligated.

Color 2. Macroscopic findings of the autopsied specimen showing that ligated varix was ulcerated without bleeding, the varix between the ligated varix was firm and mucosa near the varix was erosive with bleeding.
Color 1  Endoscopic findings before propranolol administration. A: Bleeding from cardiac portal hypertensive gastropathy. B: Bleeding from antral portal hypertensive gastropathy.

Color 2  Endoscopic findings after propranolol administration. A: Improved cardiac red marks without bleeding. B: Improved antral red marks without bleeding.

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Color 1  Endoscopic findings. A • B: Submucosal tumor with central depression located in the greater curvature of the upper gastric body. C: Artificial ulcer shows on the top of tumor after microwave irradiation.

Color 2  A: Resected tumor was 3×2cm in size. B • C: Histological examination revealed the heterotopic gastric mucosa with the cystic dilatation in the submucosal layer.
Color 1: Endoscopic finding showed a protruding lesion with an ulcer in the gastric antrum, 25mm in size.
Color 2: Endoscopic finding showed a submucosal tumor 10mm in size in the gastric antrum.

Color 1: Endoscopic picture shows a depressed lesion in greater curvature of the gastric lower body.
Color 2: Endoscopic picture with indigocarmine spraying technique. Fold convergence is not seen.

Color 1: Before eradication of H. pylori. A: Endoscopic picture showed redish nodular lesion surrounding whitish mucosa. B: After spraying indigocarmine showed a scattered irregular depressed lesion.
Color 1: Esophagogastroduodenoscopy showed submucosal tumor with dent in the posterior wall of the upper body of the stomach.

Color 2: The laparoscopic findings of the submucosal tumor.

Color 1: A: Endoscopic finding (1993) showed multiple appearance of small polyps on the greater curvature from upper to middle corpus. B: Endoscopic finding (August, 1995) showed disappearance of polyps on the greater curvature from upper to middle corpus. C: Endoscopic finding (August, 1995) showed sessile type elevated lesion with 2mm in diameter on the greater curvature of angulus. D: Endoscopic finding (June, 1996) showed sub-pedunculated type elevated lesion was seen and the lesion became larger in size (10 mm in diameter).

Color 2: A: Al-PAS-stained section of the cancer tissue resected by EMR method showed positive cells. B: No Con A-positive cell was seen in the cancer tissue resected by EMR method. C: The cancer tissue resected by EMR method showed Con A-positive fundic glandular cells in its initial part. D: The specimen taken from the non-cancerous lesion of the upper corpus in July 1996 showed Con A-positive fundic glandular cells.
Color 1  A type III polyp with 2cm in diameter of the Yamada's criteria at the lesser curvature of the pyloric antrum (March 22, 1996).

Color 2  The enlarged lobular polyp (3cm in diameter) with superficial lobulation (May 30, 1996).

Color 3  The specimen from polypectomy (p53 stain, ×200) : A high grade positive p53 staining atypical malignant cells.

Color 1  Endoscopic findings showed the SMT like elevated lesion. A : There was a hemorrhagic ulcer on the tumor in February 1995. B : The ulcer was healed, but showed irregular surface.

Color 2  Macroscopic finding of the resected stomach reveals a lesion 30×35mm in size on the anterior wall of the antrum.
Color 1 Panendoscopic examination showing round ulcerated lesion with slightly elevated margin accompanied with oozing of blood.
Color 2 Cut surface of the liver showing diffuse cavities and whitish multiple metastatic lesions.

Color 1 Endoscopic findings showing an active gastric ulcer in the antrum of the stomach (A), and a healing ulcer in the duodenal bulb (B)
Color 2 Endoscopic findings showing an active gastric ulcer and the gastroduodenal fistula “double pylorus” in the antrum of the stomach (A), and a healing ulcer in the duodenal bulb (B).

Color 1 A: Varices with a red plaque at the angle of descending and horizontal portion of the duodenum. B: EVL. C: Scar of the EVL.
Color 1 Hyperplastic polyp of the duodenum was showed by usual endoscopic examination.
Color 2 Endoscopic finding showing the polyp under a good view using a cap.

Color 1 Endoscopic finding of the third portion of the duodenum. An irregular ulceration with round wall was observed.
Color 2 The surgical specimen showed a type 3 advanced cancer.

Color 1 The first endoscopic examination revealed an active ulcer in and around the “saddle portion” of anastomosis toward the jejunum.
Color 2 The second endoscopy disclosed a healing ulcer (A) and fecal material (B) in the “saddle portion” of anastomosis.
Color 3 A fistula is seen near the anastomosis toward the jejunum that has penetrated into the transverse colon. Colonic mucosa is also recognized.
Color 4 Colonoscopy demonstrated a lumen lined by small bowel mucosa near the splenic flexure.
Color 1 Colonic endoscopic examination showed a tumor which had a surface combined with almost normal mucosa and severe erosive changes like a map (A) and the tumor drew the oral mucosa (B).

Color 2 The resected specimen of the transverse colon. The majority of the tumor surface was composed of the mucosa with severe erosive changes (A). The cut surface shows that the yellow mass with regular margin exist in the submucosa and the majority of the tumor surface was composed of necrotic mucosa (B).

Color 1 A • B: Colonoscopic picture on admission of the descending colon shows unevenness of the surface and stenosis of the lumen with edema and oozing.

Color 2 A • B: Colonoscopic picture on the 9th hospital day shows short longitudinal or maplike ulcers.

Color 1 A: Endoscopic finding before the medication. B: An ileocecal ulcer tended to heal just after the medication.
Color 1  A ⋅ B: Endoscopic findings of the sigmoid colon shows nodular elevated lesion with some reddening and erosion at 15cm oral side from the anus.

Color 2  Sigmoidoscopic biopsy specimen revealed scattered endometrial glands in the submucosal layer (A). Histological examination showed the spread of the endometrial tissue penetrated from serosa to mucosa of the resected sigmoid colon (B).

Color 3  Macroscopic appearance of the resected sigmoid colon showed remarkably thickened wall with fibrotic change, and granular elevated lesion of mucosa.

Color 1  A: Colonoscopic findings showed a ring pessary and the whitish mucosa at the rectum. B: Colonoscopic findings showed whitish elevated lesion and a part of ring pessary at the rectum.

Color 2  A: Colonoscopic findings showed hemispherical elevated lesion at the rectum. B: Colonoscopic findings showed Neratov’s catheter which escaped from the vagina at the rectum.
Color 1: A Colonoscopic picture with indigocarmine spray showed a Is type lesion of the ascending colon.

Color 2: After submucosal injection of saline, the lesion was not elevated.

Color 1: A nodular elevated lesion in the rectum. B: Type 2 tumor in the SD junction.

Color 2: A: Diffuse, small cell-type lymphoma. Depth of the lymphoma invasion was sm1. B: Well differentiated adenocarcinoma. Depth of the cancer invasion was m.

Color 3: A: Macroscopic findings of the resected specimen revealed type 2 cancer in the sigmoid colon. B: Pathological findings of the resected specimen revealed well differentiated adenocarcinoma. Depth of the cancer invasion was sm1.
**Color 1** Endoscopic picture showed the whitish yellow rectal submucosal tumor with no mucosal abnormality.

**Color 2** Microscopic picture showed PAS-Alcian blue stain positive cells only in the adenocarcinoma component.

**Color 3** Microscopic picture showed chromogranin A positive cells in both the components of adenocarcinoma and carcinoid.

**Color 4** Microscopic picture showed endocrine granule constituent (EGC) positive cells in both the components of adenocarcinoma and carcinoid.

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**Color 1** A: Colonoscopy shows melanosis coli in markedly dilated sigmoid colon. B: Colonoscopy shows a polypoid lesion of Is type in the rectosigmoid.

**Color 2** A: Photomicrograph demonstrates a well differentiated adenocarcinoma invading the muscularis mucosae (HE stain, original magnification, ×1.5). B: Ganglion cells in the muscularis propria of the dilated sigmoid colon are found to be normal (HE stain, original magnification, ×40).
症例
辻野 武ほか論文
<本文308～309p>

Color 1 A・B: Colonoscopic picture of the anal canal shows a pedunculated polyp.

症例
鈴木雄久ほか論文
<本文310～311p>

Color 1 Colonoscopy revealed marked vascular ectasia around the anastomosis of the sigmoid-colon.
Color 2 Blood is observed around the anastomosis.

症例
小金井裕之ほか論文
<本文314～315p>

Color 1 Endoscopic picture of the duodenal papilla. A: The duodenal papilla is swelling. B: Bleeding from the orifice of duodenal papilla.
Color 2 Microscopic findings of the liver needle biopsy. It is recognized that a little infiltration of inflammatory cells to cholangiocytes and extensive destruction of them.
**Case 1** Endoscopic view of inflated balloon across the papilla.
**Case 2** Endoscopic view of stones extracted from Vater's papilla.

**Case 1** During electrohydraulic lithotripsy (EHL), bleeding was encountered from the mass, having been thought to be a stone.

**Case 1** A: PTCS finding showed a choledocal stone, 2cm in diameter at the level of the common hepatic bile duct. B: PTCS finding showed a papillary, easy-bleeding protruding lesion at the inferior portion of the bile duct distal to the stone.
**Case 2** Macroscopic finding showed a papillary-infiltrative tumor located at the middle portion to the inferior portion of the bile duct.

**Case 1** Microscopic examination showed cubic tumor cells with sheets, cystic, papillary formation.
**Case 2** Immuno-histological staining for $\alpha_1$-antitrypsin was positive.