

FIG. 1

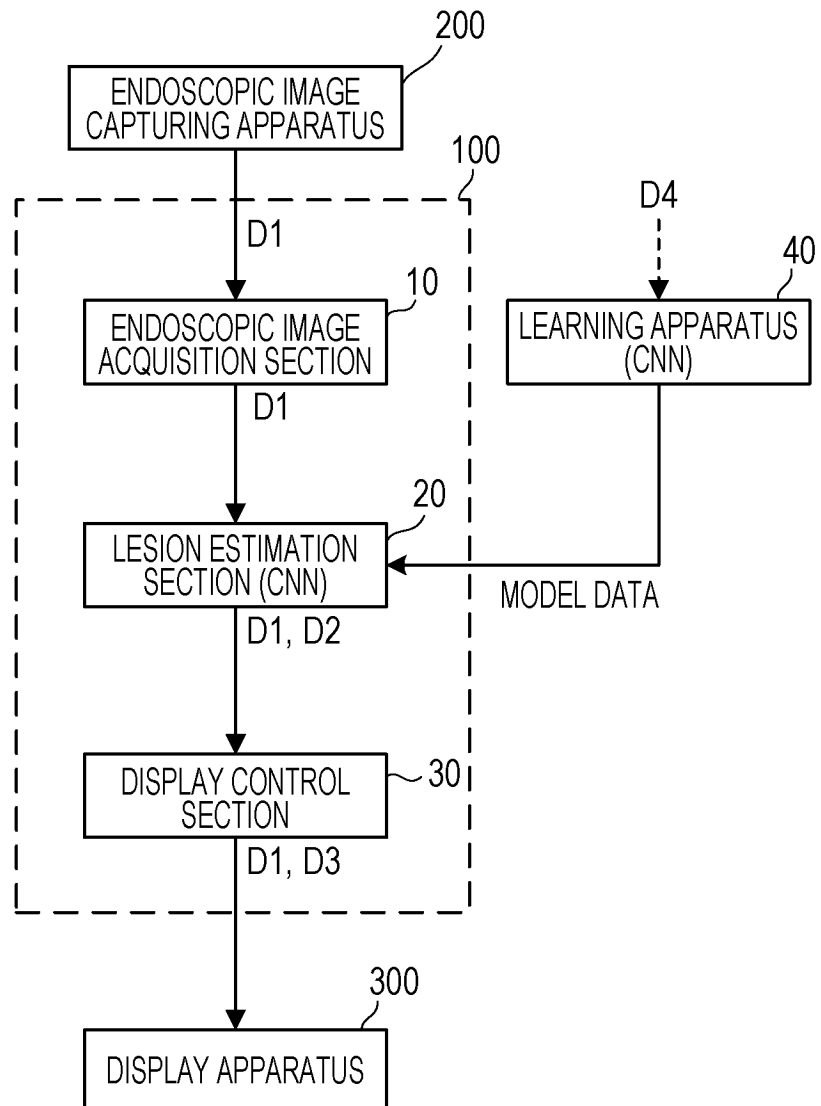


FIG. 2

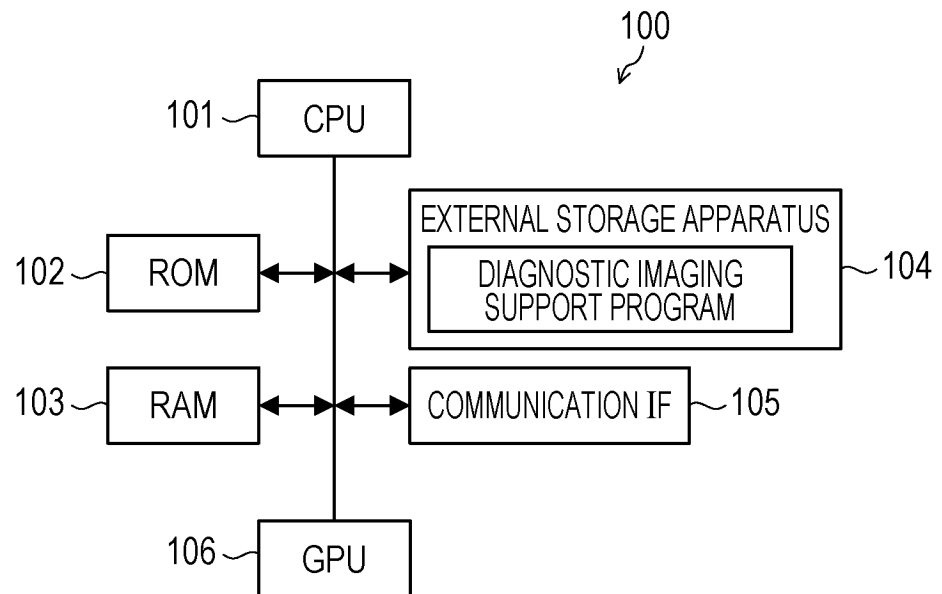


FIG. 3

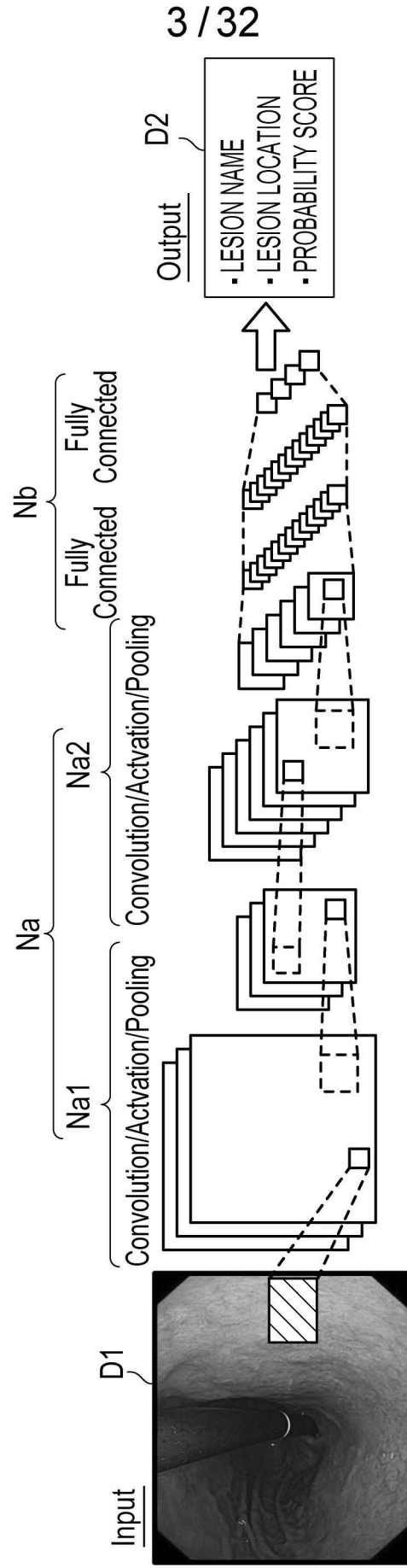


FIG. 4

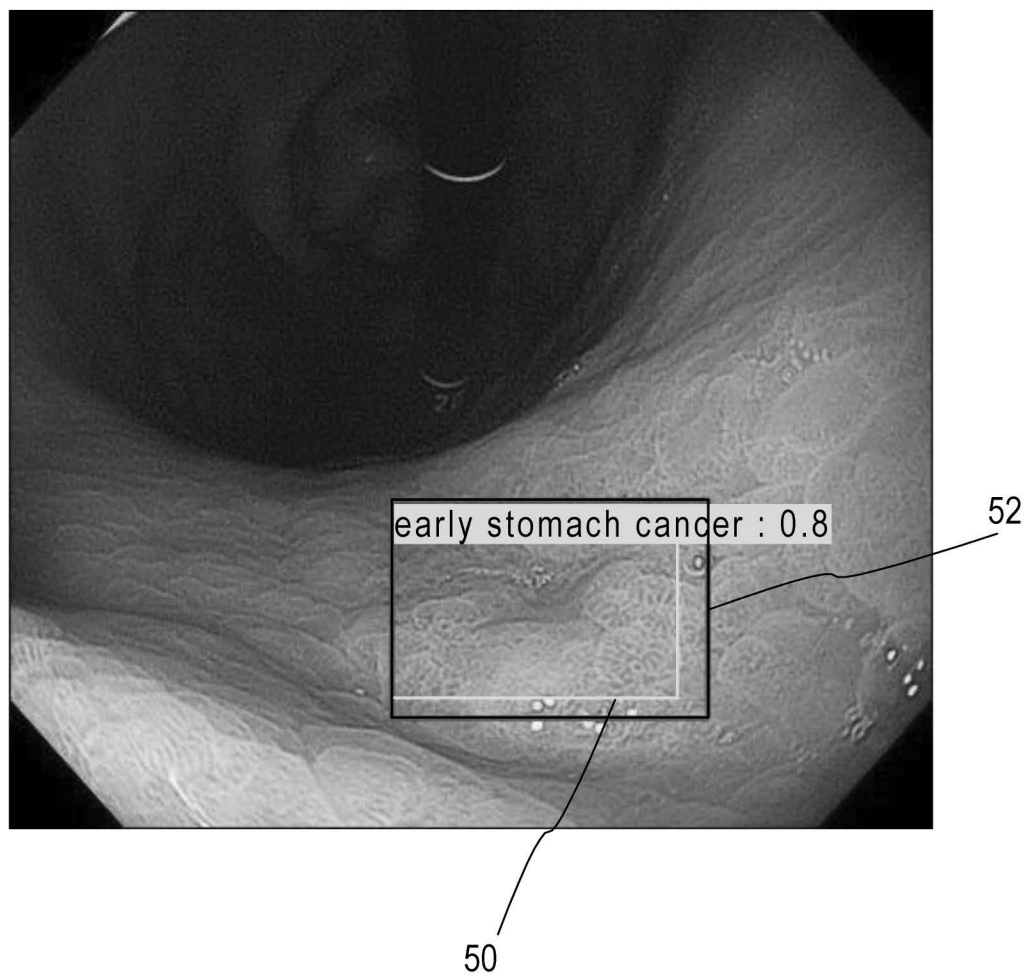


FIG. 5

MALE/FEMALE	52/17
AGE (MEDIAN)	67
TUMOR SIZE (MEDIAN) mm, RANGE	24, 3-170
LOCATION OF TUMOR	
UPPER PART OF STOMACH	14
MIDDLE PART OF STOMACH	27
LOWER PART OF STOMACH	33
ENTIRE REGION OF STOMACH	3
MACROSCOPIC CLASSIFICATION	
TYPE 0-I	1
TYPE 0-IIa	8
TYPE 0-IIb	3
TYPE 0-IIc	38
COMBINED TYPE OF TYPE 0 (0-Ia+IIc, IIc+IIb, IIc+III)	6
TYPE 1	1
TYPE 2	8
TYPE 3	6
TYPE 4	6
TUMOR DEPTH	
T1a (MUCOSA)	43
T1b (SUBMUCOSA)	9
T2 (MUSCULARIS PROPRIA)	7
T3 (SUBSerosa)	2
T4a (Serosa)	16
HISTOLOGICAL CLASSIFICATION	
DIFFERENTIATED	50
UNDIFFERENTIATED	27

FIG. 6A

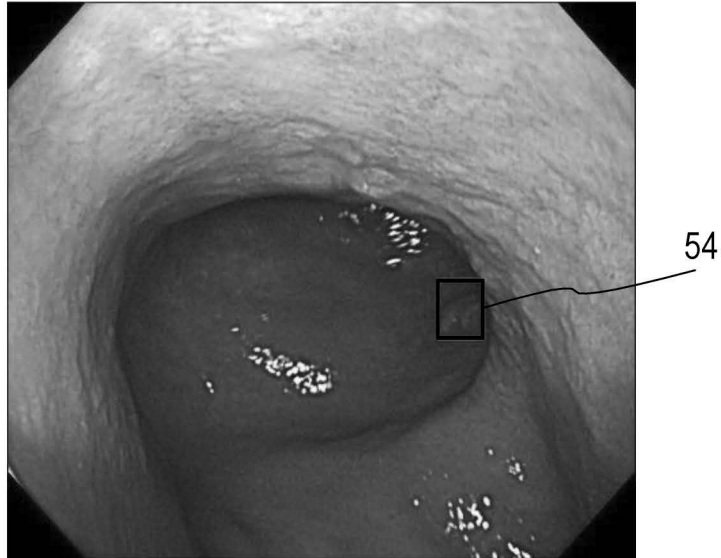


FIG. 6B

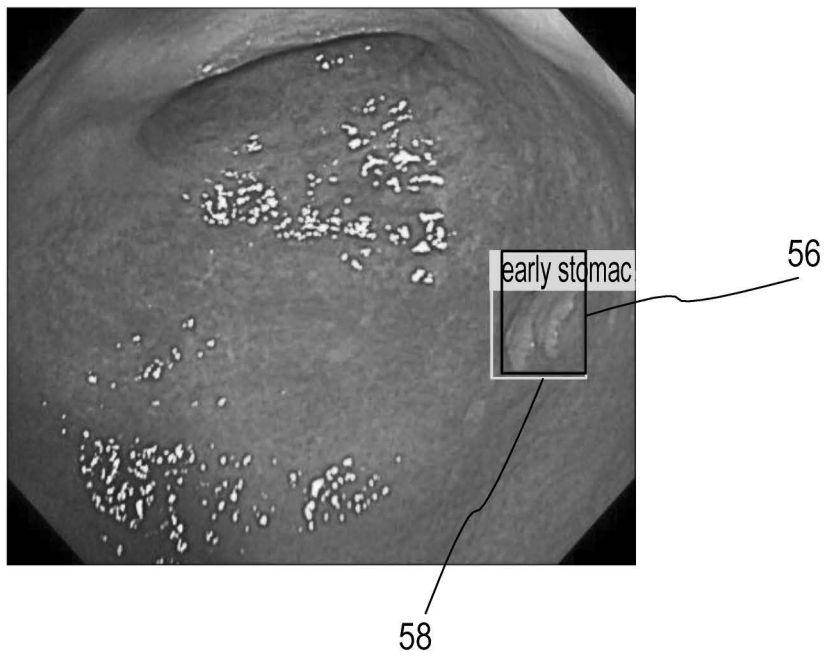
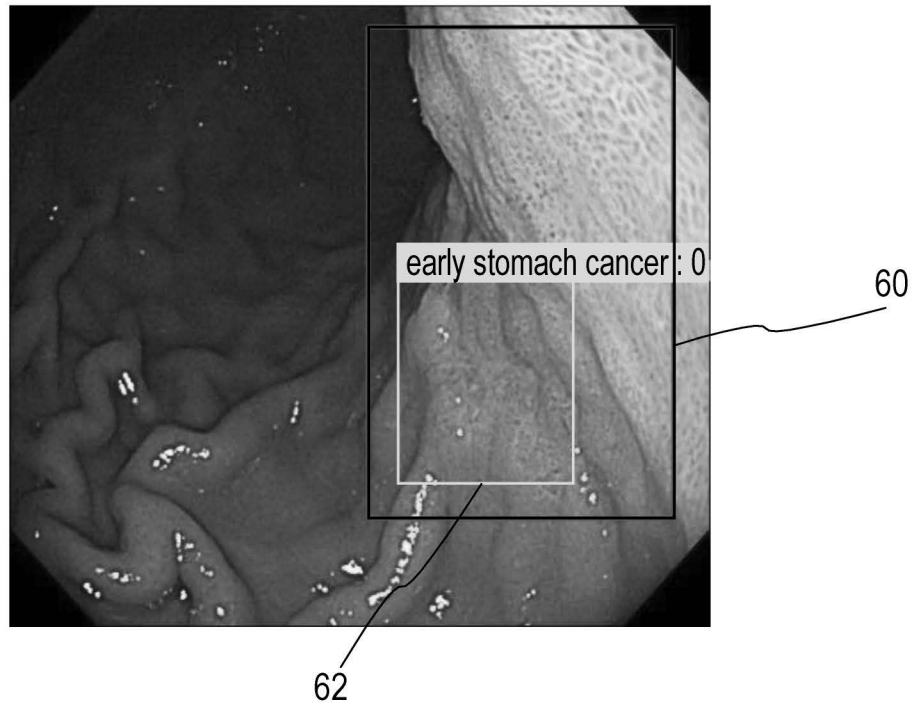


FIG. 7



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FIG. 8A



FIG. 8B

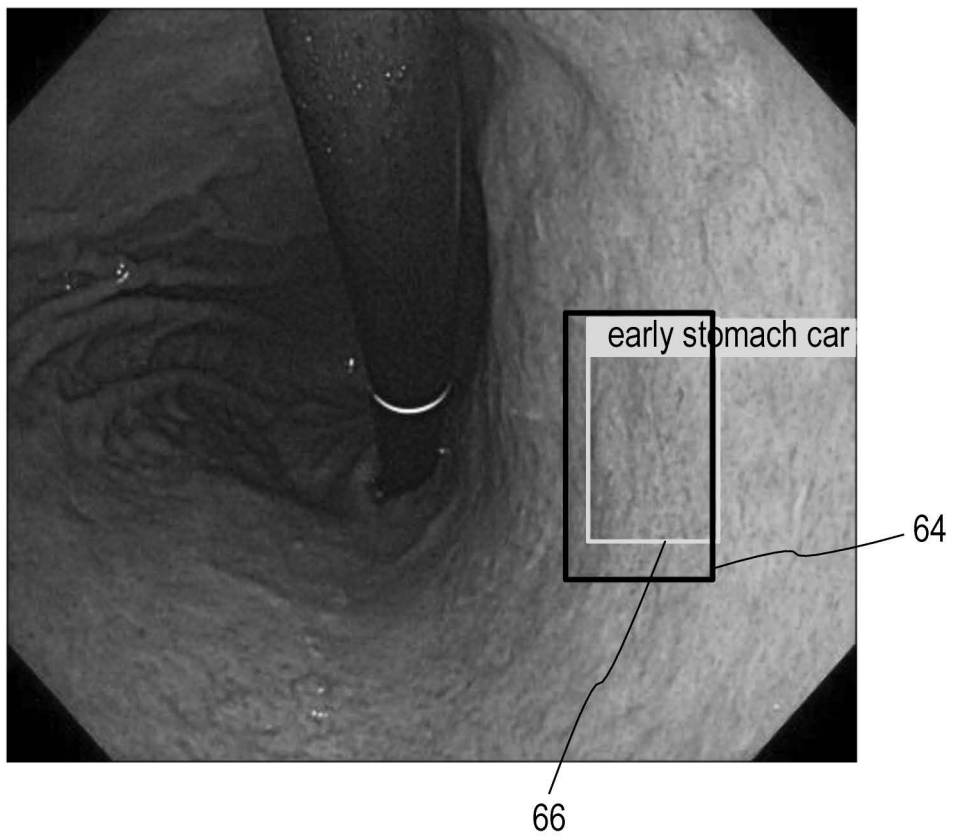


FIG. 9

TUMOR DEPTH	TUMOR SIZE (mm)			
	≤ 5	6-10	11-20	≥ 21
T1a (MUCOSA)	1/6(16.7)	11/11(100)	16/17(94.1)	9/9(100)
T1b (SUBMUCOSA)	0/0	0/0	1/1(100)	8/8(100)
T2 (MUSCULARIS PROPRIA)	0/0	0/0	0/0	7/7(100)
T3 (SUBSerosa)	0/0	0/0	0/0	2/2(100)
T4a (Serosa)	0/0	0/0	0/0	16/16(100)

FIG. 10

PATIENT	TUMOR SIZE (mm)	TUMOR DEPTH	MACROSCOPIC CLASSIFICATION	HISTOLOGICAL CLASSIFICATION
a	3	T1a	0-IIc	DIFFERENTIATED
b	4	T1a	0-IIc	DIFFERENTIATED
c	4	T1a	0-IIc	DIFFERENTIATED
d	5	T1a	0-IIc	DIFFERENTIATED
e	5	T1a	0-IIc	DIFFERENTIATED
f	16	T1a	0-IIc	DIFFERENTIATED

FIG. 11A

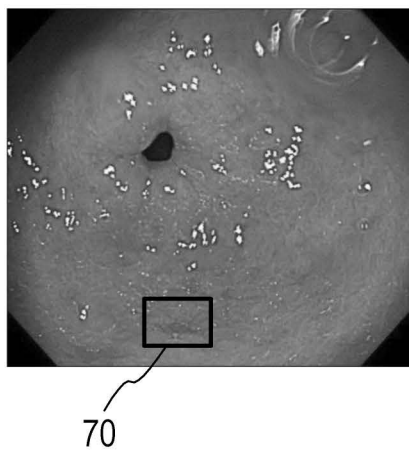


FIG. 11B

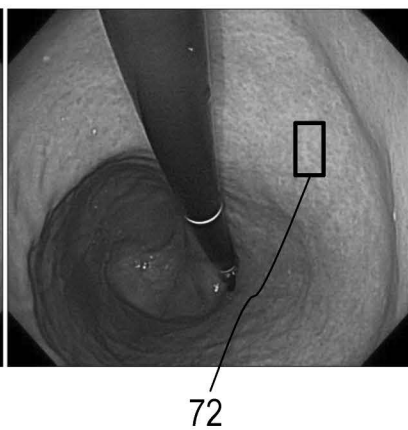


FIG. 11C

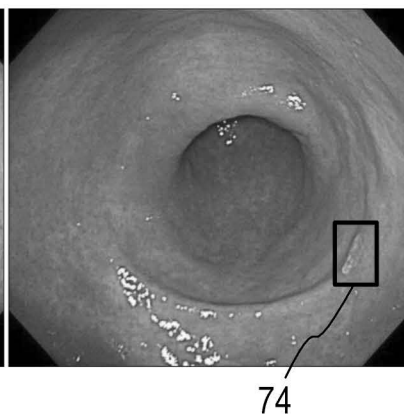


FIG. 11D

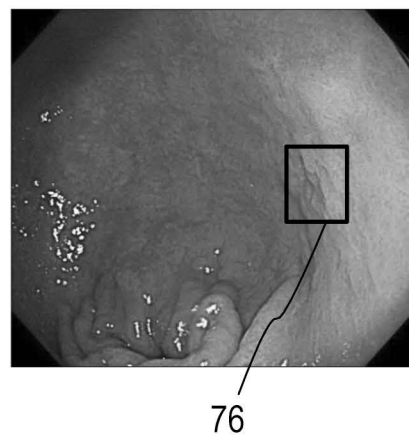


FIG. 11E

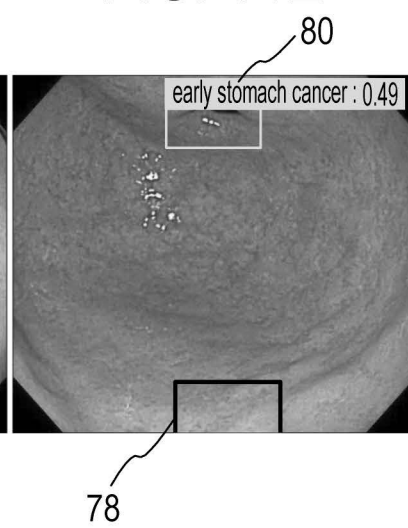


FIG. 11F

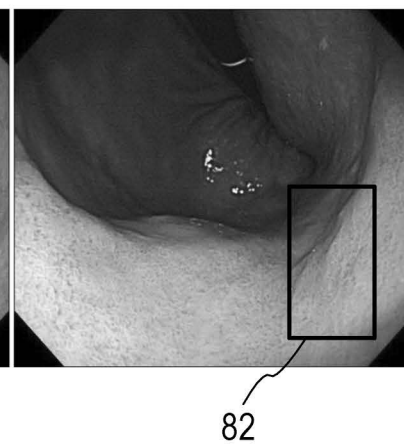


FIG. 12

GASTRITIS (REDNESS, ATROPHY, INTESTINAL METAPLASIA)	76
NORMAL ANATOMICAL STRUCTURE (CARDIA, PYLORUS, ANGULAR INCISURE)	28
FOLD	8
BLOOD	8
MUCUS	8
SCAR	7
HALATION	6
PERISTALSIS	4
VASA	3
XANTHOMA	3
SUCTION MARK	2
BUBBLE	2
HYPERPLASTIC POLYP	2
FOCAL BLUR	2
SUBMUCOSAL TUMOR	1
EXTRAMURAL PRESSURE	1

FIG. 13A

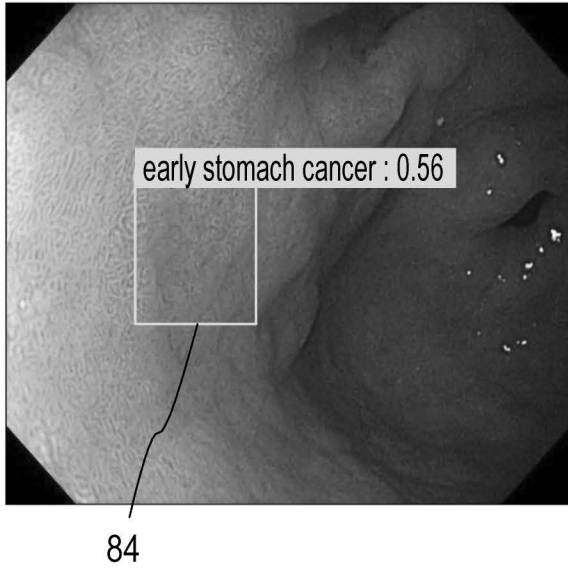


FIG. 13B

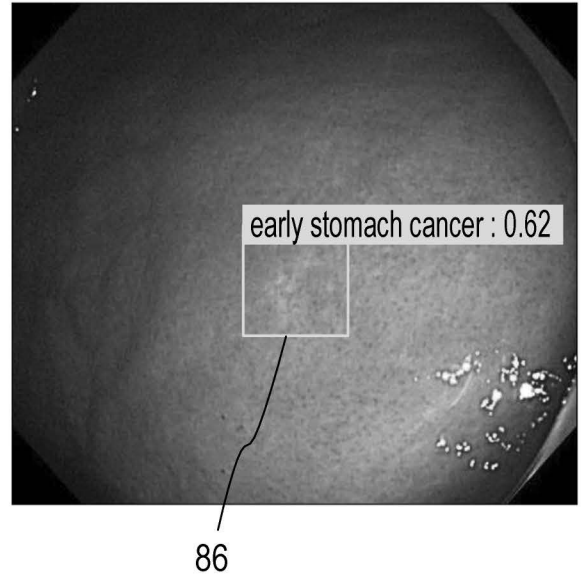


FIG. 13C

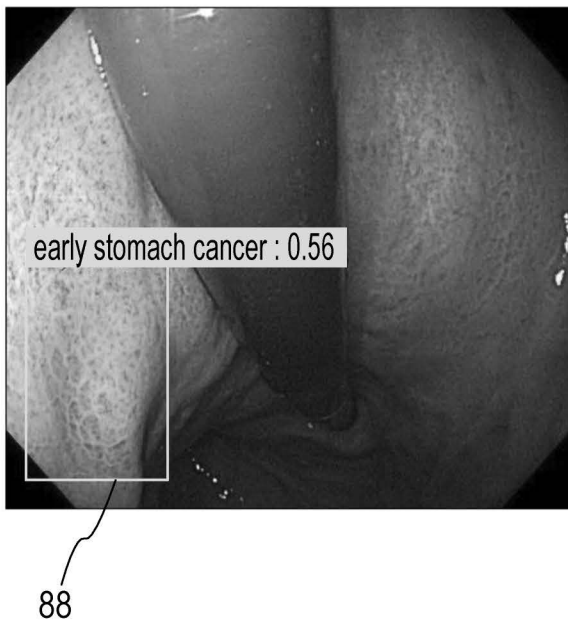


FIG. 14A

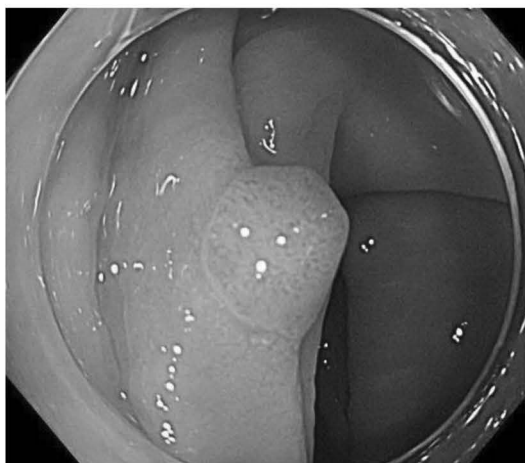


FIG. 14B

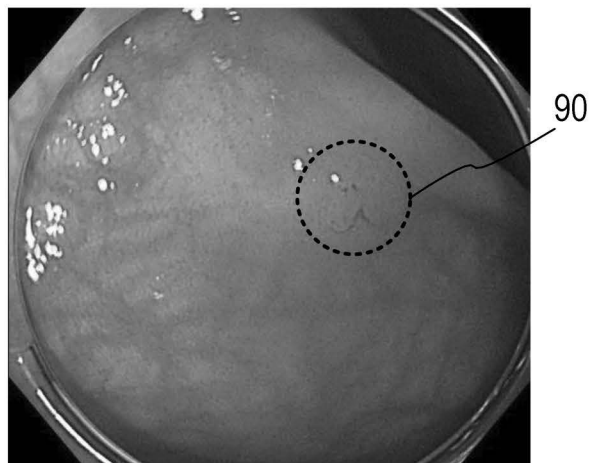


FIG. 14C

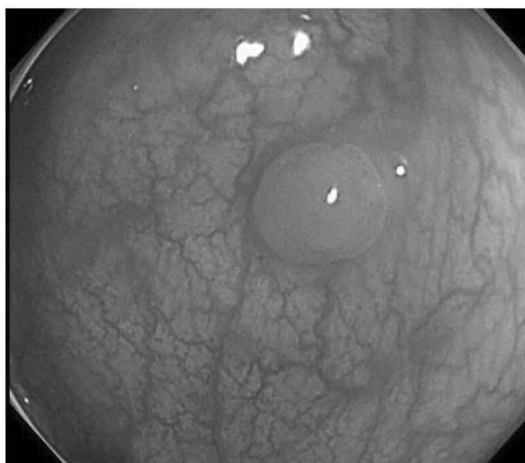


FIG. 14D

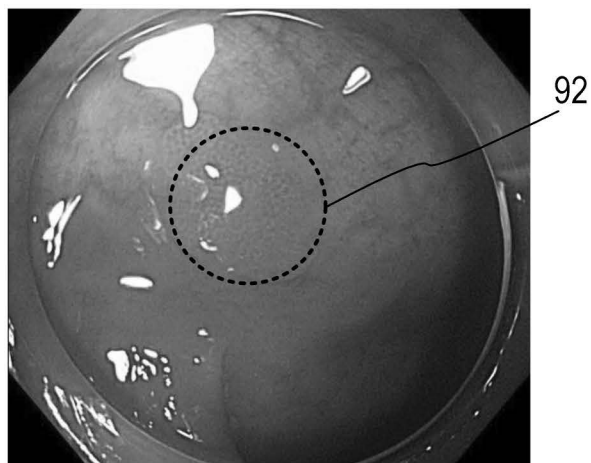


FIG. 14E

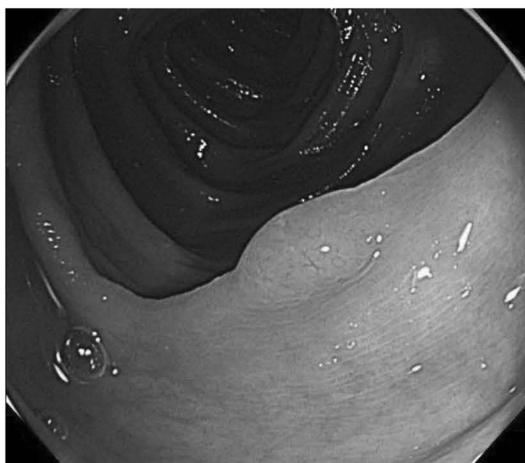


FIG. 14F

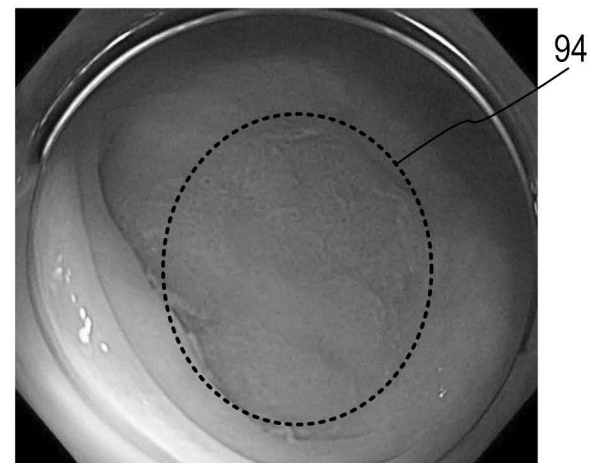


FIG. 15A

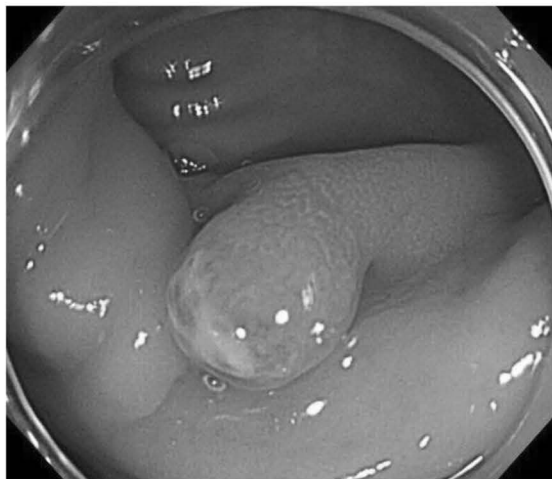


FIG. 15B



FIG. 15C

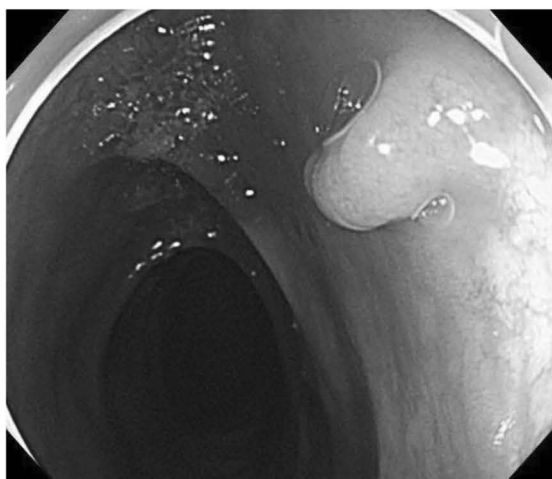


FIG. 15D

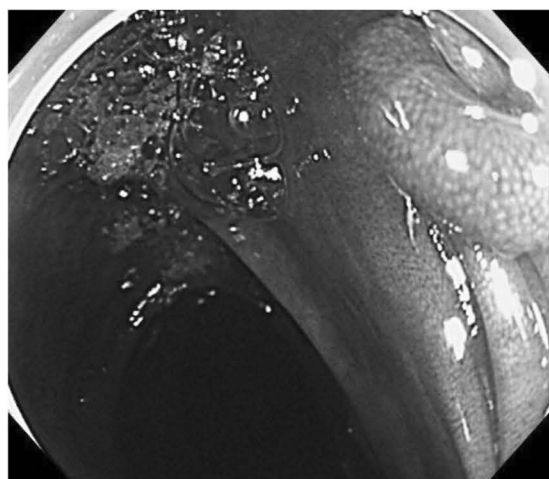


FIG. 15E

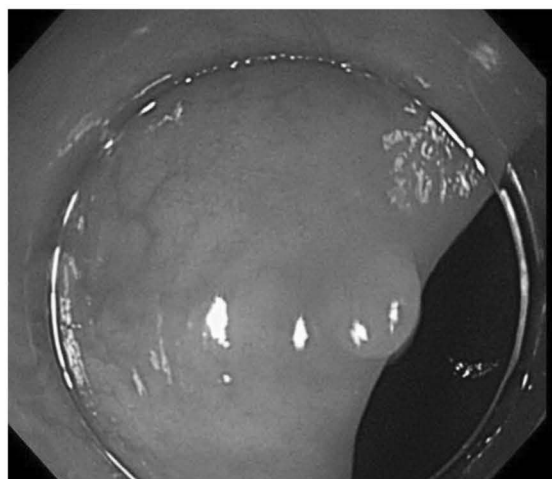


FIG. 15F

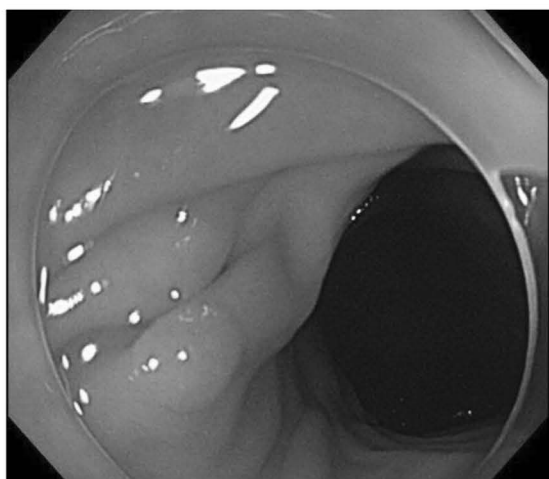


FIG. 16

LEARNING DATA SET				
COLORECTAL POLYP TYPE	NUMBER OF POLYPS (%)	WHITE LIGHT (IMAGE)	NBI NARROW-BAND LIGHT (IMAGE)	TOTAL NUMBER OF IMAGES
ADENOMA	3,513(74)	9,310(53)	2,085(73)	11,395(56)
HYPERPLASTIC POLYP	1,058(22)	2,002(11)	519(18)	2,521(12)
SSAP	22(0)	116(1)	23(1)	139(1)
ADENOCARCINOMA	68(1)	1,468(8)	131(5)	1,599(8)
OTHERS	91(2)	657(4)	107(4)	764(4)
NORMAL	-	4,013(23)	0(0)	4,013(20)
TOTAL	4,752(100)	17,566(100)	2,865(100)	20,431(100)

FIG. 17

ASSESSMENT TEST DATA SET					
COLORECTAL POLYP TYPE	SIZE	NUMBER OF POLYPS (%)	WHITE LIGHT (IMAGE)	NBI NARROW-BAND LIGHT (IMAGE)	TOTAL NUMBER OF IMAGES
ADENOMA N=218 PROTRUDING: 199 FLAT: 19	≤ 5 mm	156(50)	638(10)	208(63)	846(12)
	5-9 mm	52(17)			
	≥ 10 mm	10(3)			
HYPERPLASTIC POLYP N=63 PROTRUDING: 53 FLAT: 10	≤ 5 mm	56(18)	137(2)	71(21)	208(3)
	5-9 mm	7(2)			
	≥ 10 mm	0(0)			
SSAP N=7 PROTRUDING: 1 FLAT: 6	≤ 5 mm	0(0)	40(1)	8(2)	48(1)
	5-9 mm	4(1)			
	≥ 10 mm	3(1)			
ADENOCARCINOMA (SIZE ≥ 10 mm) N=4		4(1)	30(0)	3(1)	33(0)
OTHERS (SIZE ≤ 5 mm) N=17		17(6)	27(0)	10(3)	37(1)
NORMAL		-	5,874(87)	31(9)	5,905(83)
TOTAL		309(100)	6,750(100)	331(100)	7,081(100)

FIG. 18

FALSE-POSITIVE IMAGE (N=165)		
CATEGORY	SUB-CATEGORY	NUMBER (%)
NORMAL STRUCTURE	ILEOCECAL VALVE	56(34)
	APPENDICEAL ORIFICE	6(4)
	ANUS	2(1)
COLONIC FOLDS		55(33)
FECES		4(2)
TRUE POLYP?		12(7)
OTHERS	HALATION	14(8)
	NORMAL MUCOSA	8(5)
	FOGGING OF CAMERA LENS SURFACE	4(2)
	BLUR	2(1)
	SCAR AFTER POLYP RESECTION	1(1)
	VASODILATION	1(1)
FALSE-NEGATIVE IMAGE (N=89)		
TEXTURE OF SURFACE OF COLORECTAL POLYP WAS LESS RECOGNIZABLE BECAUSE OF SMALL OR DARK COLORECTAL POLYP		50(56)
COLORECTAL POLYP WAS CAPTURED FROM EITHER SIDE OR PORTION THEREOF WAS CAPTURED		34(38)
COLORECTAL POLYP WAS VERY LARGE		5(6)

FIG. 19A

	WHITE LIGHT					
		CNN CLASSIFICATION (%)				
		ADENOMA	HYPERPLASTIC POLYP	SSAP	ADENOCARCINOMA	OTHERS
HISTOLOGICAL CLASSIFICATION	ADENOMA	562(97)	14(2)	0(0)	4(1)	2(0)
	HYPERPLASTIC POLYP	64(51)	59(47)	0(0)	0(0)	2(2)
	SSAP	6(26)	12(52)	5(22)	0(0)	0(0)
	ADENOCARCINOMA	6(21)	0(0)	0(0)	23(79)	0(0)
	OTHERS	14(58)	7(29)	0(0)	0(0)	3(13)

FIG. 19B

	NBI NARROW-BAND LIGHT					
		CNN CLASSIFICATION (%)				
		ADENOMA	HYPERPLASTIC POLYP	SSAP	ADENOCARCINOMA	OTHERS
HISTOLOGICAL CLASSIFICATION	ADENOMA	197(97)	5(2)	0(0)	1(0)	0(0)
	HYPERPLASTIC POLYP	31(46)	37(54)	0(0)	0(0)	0(0)
	SSAP	2(33)	4(67)	0(0)	0(0)	0(0)
	ADENOCARCINOMA	3(100)	0(0)	0(0)	0(0)	0(0)
	OTHERS	3(30)	7(70)	0(0)	0(0)	0(0)

FIG. 20

	WHITE LIGHT			
		CNN CLASSIFICATION (%)		
		ADENOMA	HYPERPLASTIC POLYP	OTHERS
HISTOLOGICAL CLASSIFICATION	ADENOMA	348(98)	8(2)	0
	HYPERPLASTIC POLYP	49(49)	50(50)	1(1)
	OTHERS	14(58)	7(29)	3(13)

FIG. 21C

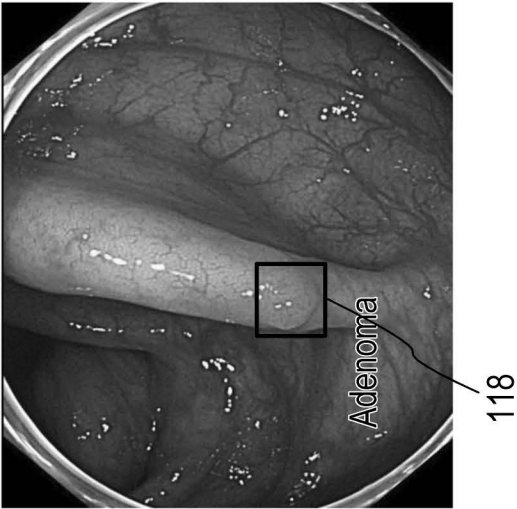


FIG. 21B

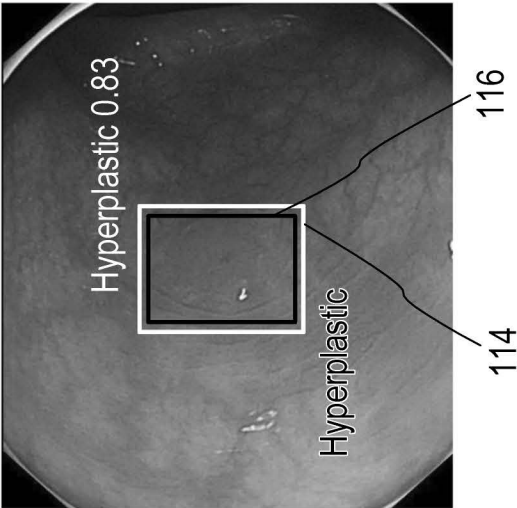


FIG. 21A

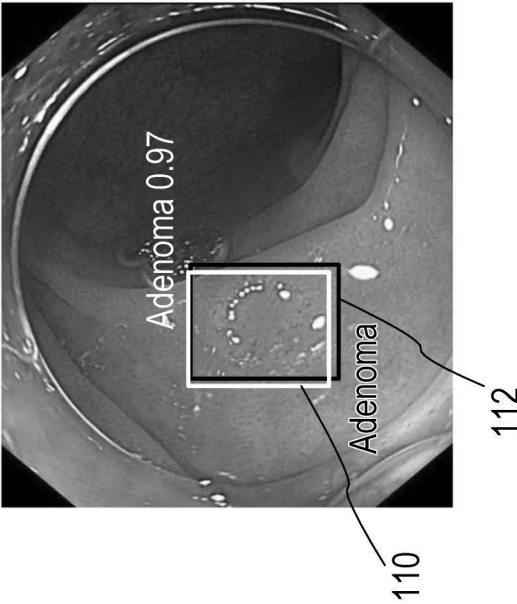


FIG. 21F

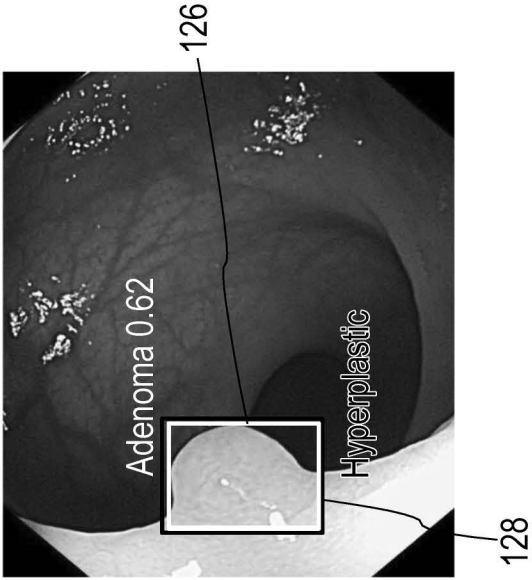


FIG. 21E

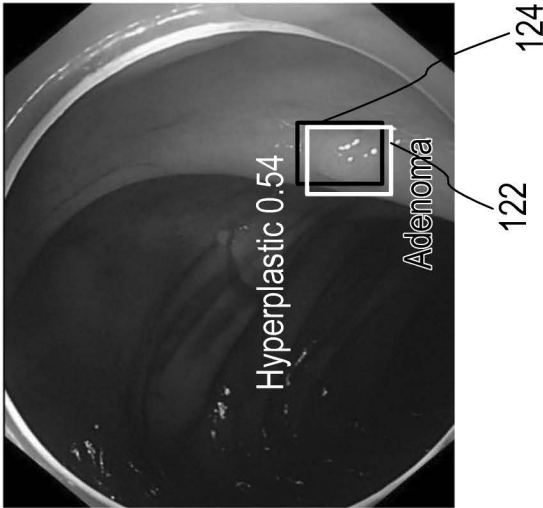


FIG. 21D

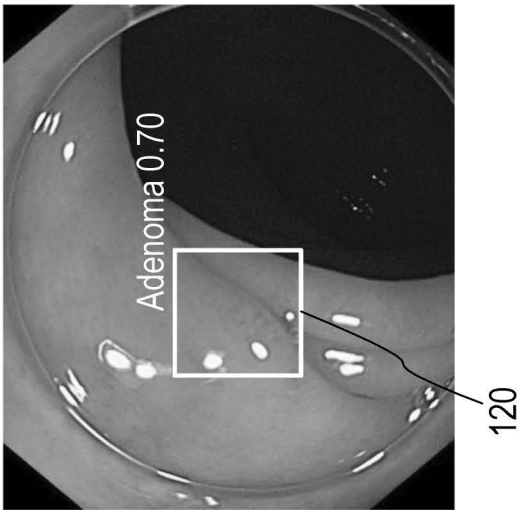


FIG. 22A

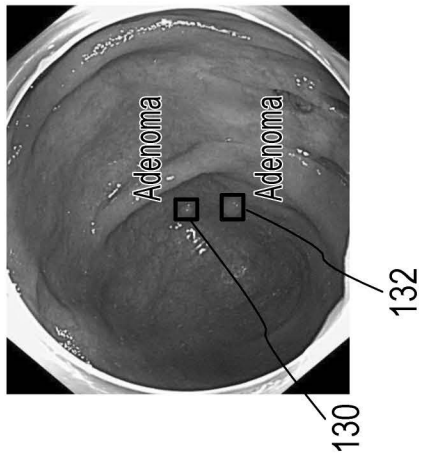


FIG. 22B

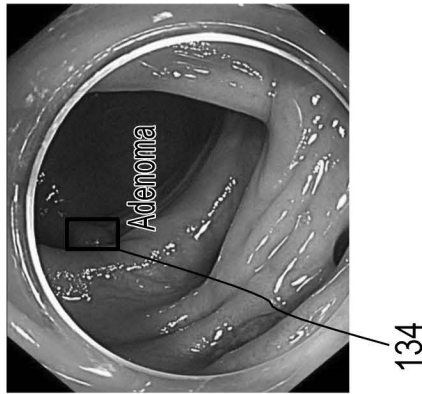


FIG. 22C

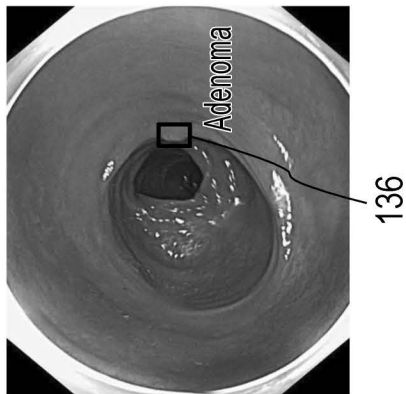


FIG. 22D

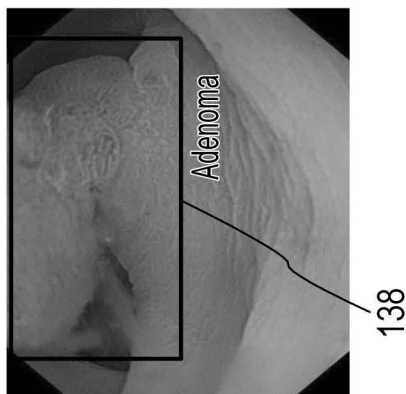


FIG. 22E

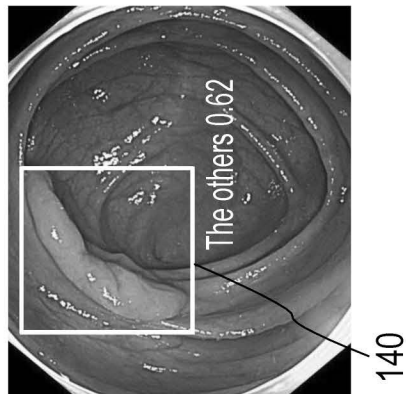


FIG. 22F

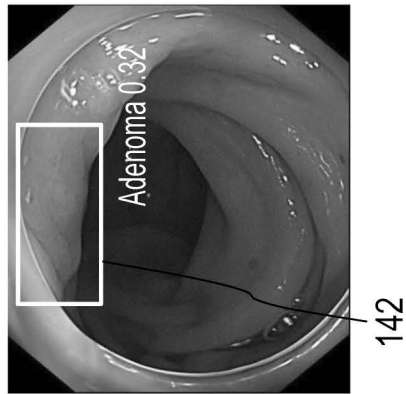


FIG. 22G

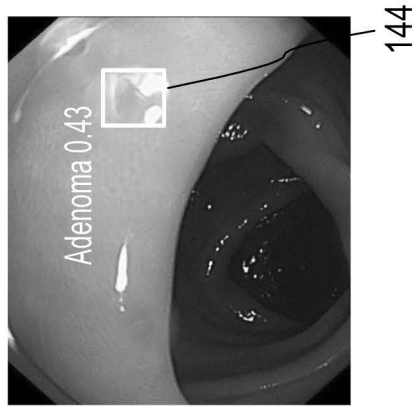


FIG. 22H

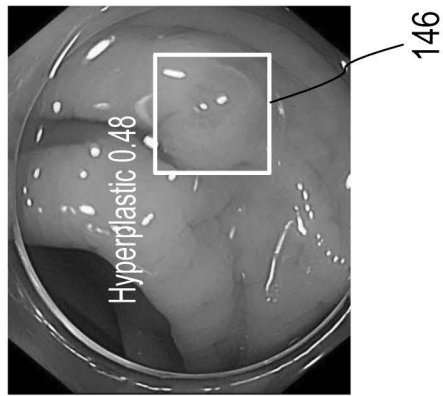


FIG. 23

FEATURES OF PATIENT (n = 47)	
MALE/FEMALE	41/6
AGE: MEDIAN/RANGE	70/48-81
FEATURES OF LESION (n = 49)	
TUMOR SIZE (MEDIAN) mm, RANGE	20/5-700
LOCATION OF TUMOR: Ce/Ut/Mt/Lt/Ae	0/8/23/10/8
MACROSCOPIC CLASSIFICATION	
SUPERFICIAL: TYPE 0-IIa, TYPE 0-IIb, TYPE 0-IIc	1/6/13/23
ADVANCED: 1/2/3/4	0/3/3/0
TUMOR DEPTH: T1a/T1b/T2-4	40/2/7
HISTOPATHOLOGY: SQUAMOUS CELL CARCINOMA (ESCC)/ADENOCARCINOMA (EAC)	41/8

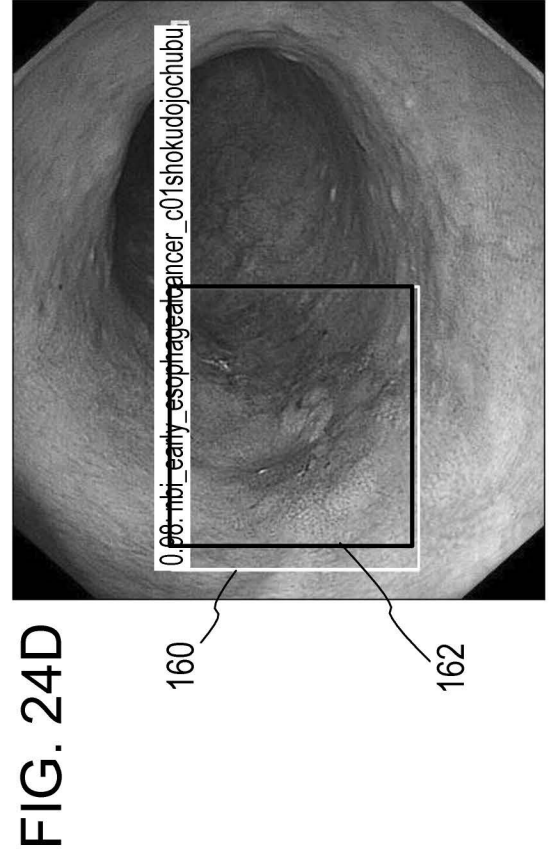
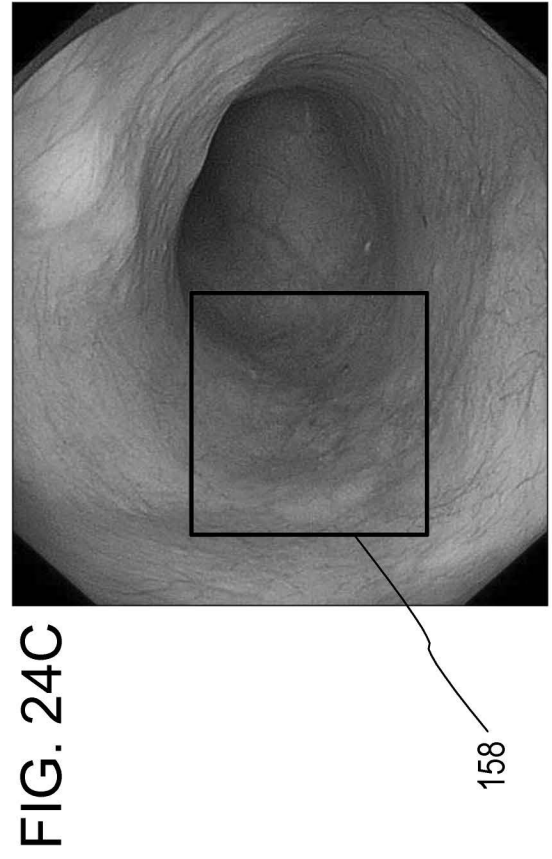
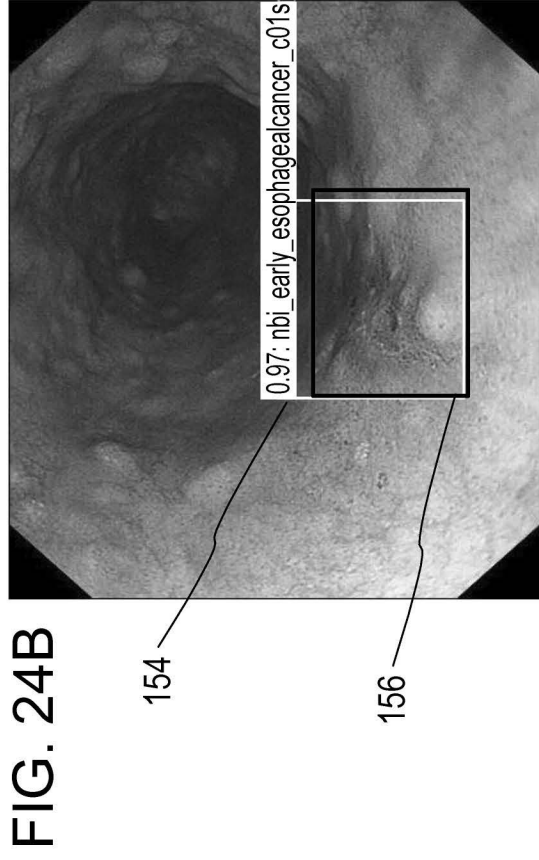
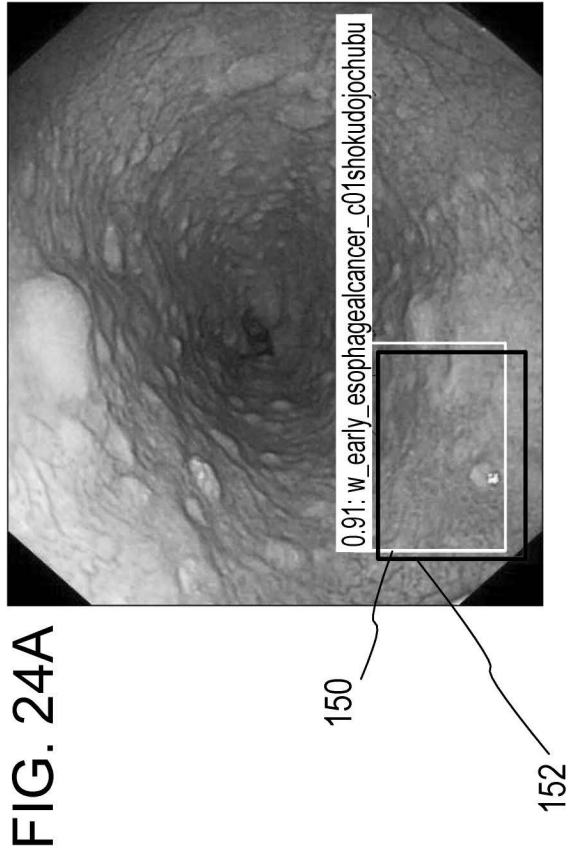


FIG. 25

		BIOPTIC RESULTS	
		ESOPHAGEAL CANCER	NON-ESOPHAGEAL CANCER
CNN DETECTION RESULTS WITH WHITE LIGHT	ESOPHAGEAL CANCER	38	35
	NON-ESOPHAGEAL CANCER	9	15
CNN DETECTION RESULTS WITH NBI NARROW-BAND LIGHT	ESOPHAGEAL CANCER	41	28
	NON-ESOPHAGEAL CANCER	5	22
COMPREHENSIVE CNN DETECTION RESULTS	ESOPHAGEAL CANCER	46	42
	NON-ESOPHAGEAL CANCER	1	8

FIG. 26

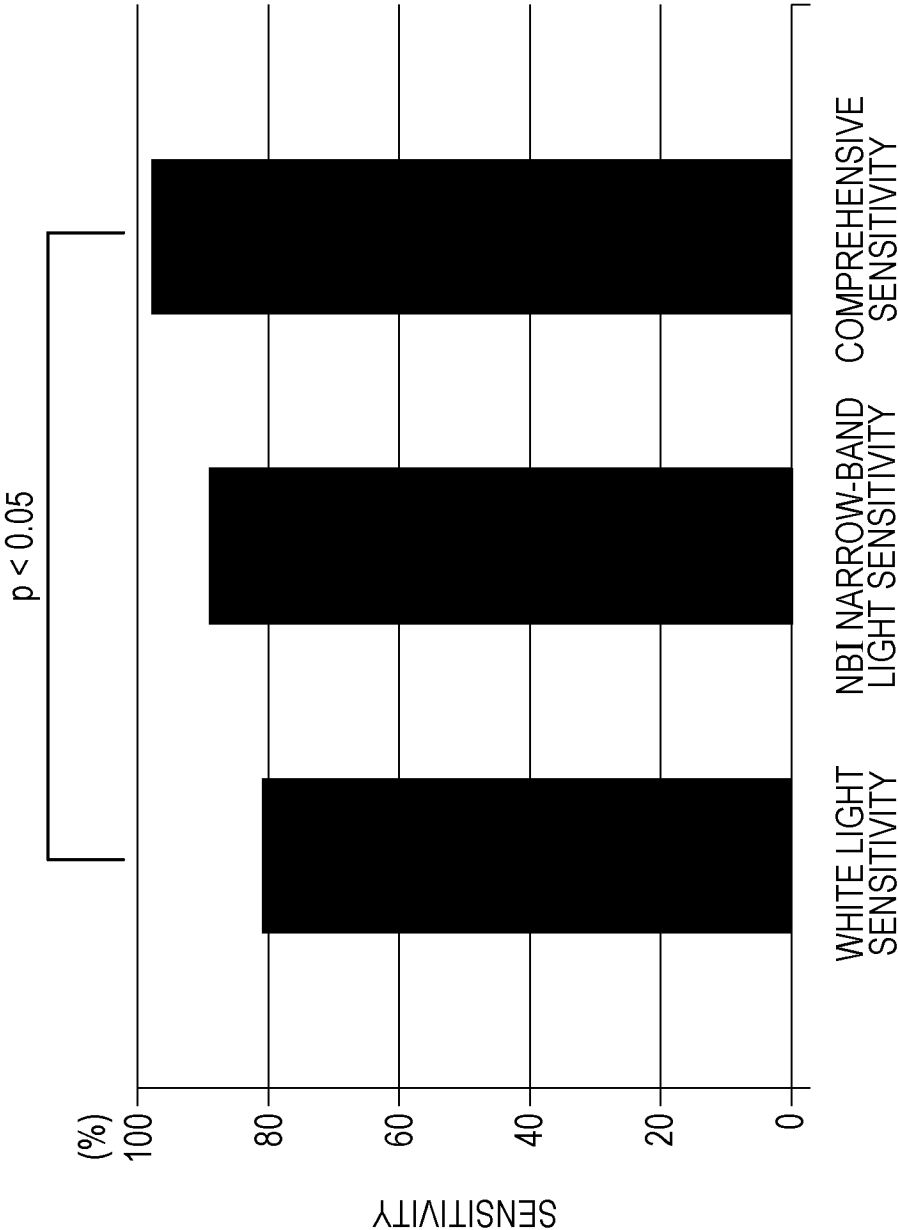


FIG. 27

		BIOPTIC RESULTS	
		ESOPHAGEAL CANCER	NON-ESOPHAGEAL CANCER
CNN DETECTION RESULTS WITH WHITE LIGHT	ESOPHAGEAL CANCER	61	105
	NON-ESOPHAGEAL CANCER	28	364
CNN DETECTION RESULTS WITH NBI NARROW-BAND LIGHT	ESOPHAGEAL CANCER	64	85
	NON-ESOPHAGEAL CANCER	15	396

FIG. 28

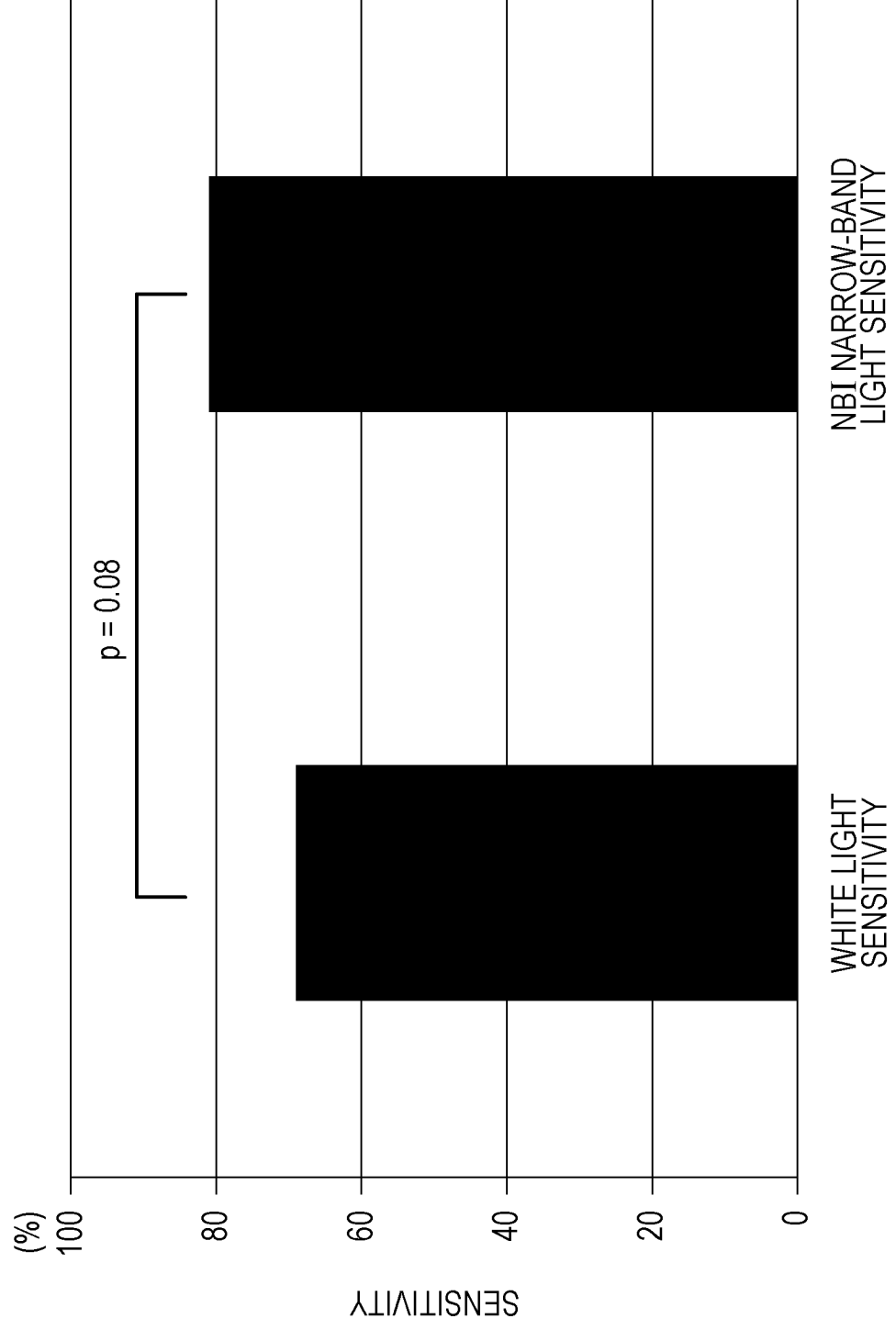


FIG. 29

	WHITE LIGHT	NBI NARROW-BAND LIGHT	ALL ENDOSCOPIC IMAGES
SUPERFICIAL ESOPHAGEAL CANCER	100%(75/75)	99%(67/68)	99%(142/143)
ADVANCED ESOPHAGEAL CANCER	100%(14/14)	82%(9/11)	92%(23/25)
ALL ESOPHAGEAL CANCERS	100%(89/89)	96%(76/79)	98%(165/168)

FIG. 30

FALSE-POSITIVE IMAGE	NUMBER (%)
CONTAINED SHADOW	95(50)
NORMAL STRUCTURE LIKELY TO BE IDENTIFIED AS ESOPHAGEAL CANCER (ESOPHAGEAL GASTRIC JUNCTION/LEFT MAIN BRONCHUS/VERTEBRAL BODY)	61(32) (29/25/7)
BENIGN LESION LIKELY TO BE MIS-DIAGNOSED AS ESOPHAGEAL CANCER (POSTOPERATIVE SCAR/FOCAL ATROPHY/BARRETT'S ESOPHAGUS/ INFLAMMATION/INTRAEPITHELIAL NEOPLASIA/KERATINIZATION/ECTOPIC GASTRIC MUCOSA)	32(17) (13/9/5/4/1/1/1)

FALSE-NEGATIVE IMAGE	NUMBER (%)
MIS-DIAGNOSED AS INFLAMMATION OF BACKGROUND MUCOSA	10(25)
BLURRED IMAGE OF SQUAMOUS CELL CARCINOMA (ESCC) WITH NBI NARROW-BAND LIGHT	7(17)
INSUFFICIENT LEARNING ABOUT ADENOCARCINOMA (EAC)	4(10)
DIFFICULT TO DIAGNOSE (LESION APPEARING IN BACKGROUND, PRESENCE OF ONLY PORTION OF LESION)	20(49)

FIG. 31A

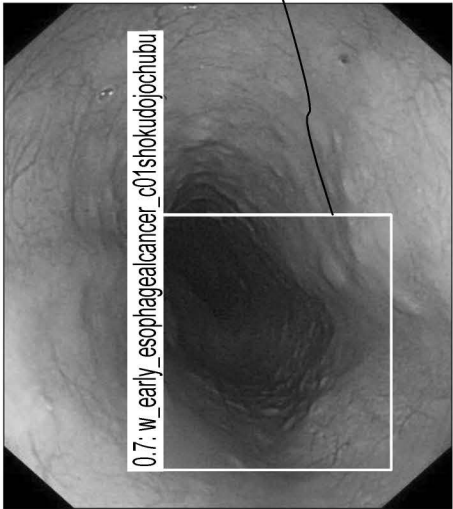


FIG. 31B

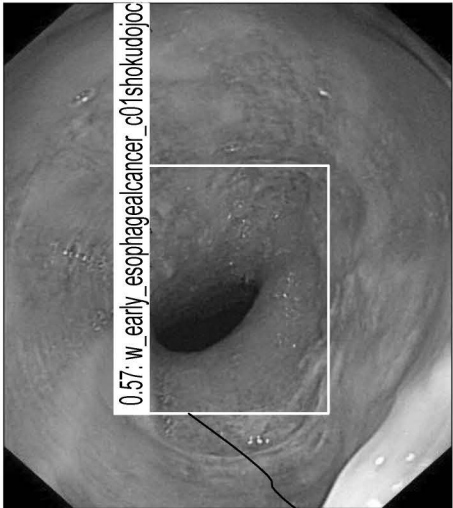


FIG. 31C

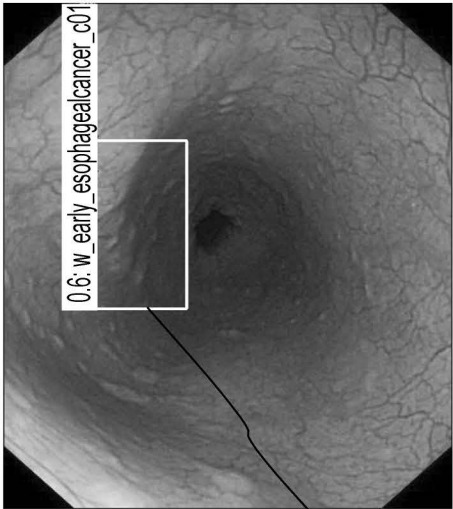


FIG. 31D



FIG. 31E

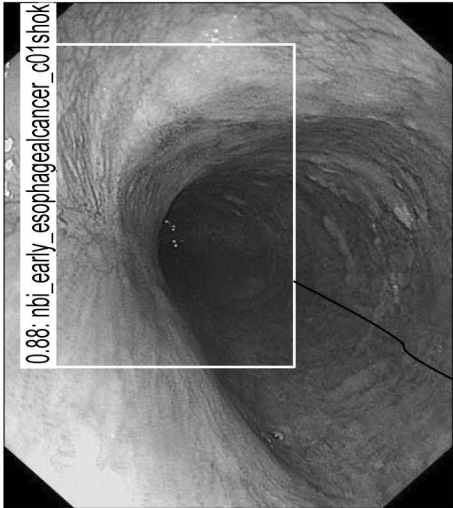


FIG. 31F

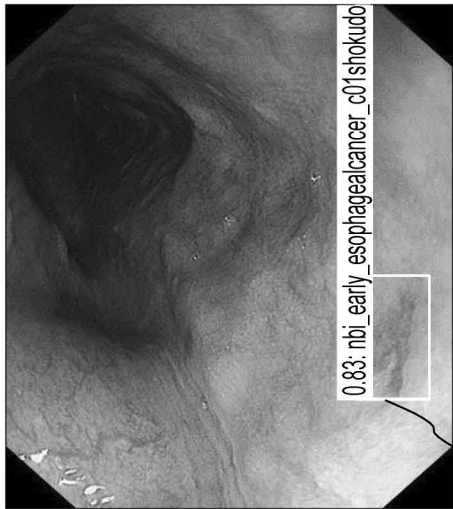


FIG. 32A

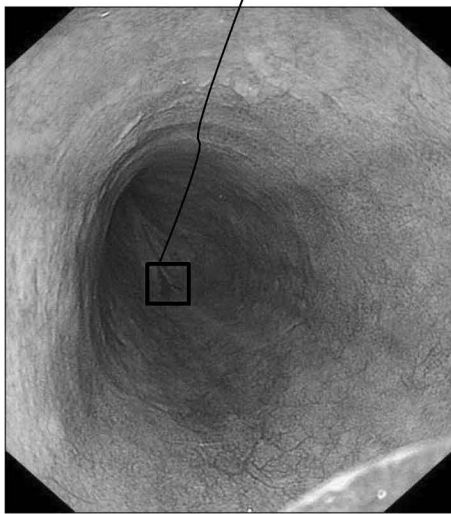


FIG. 32B

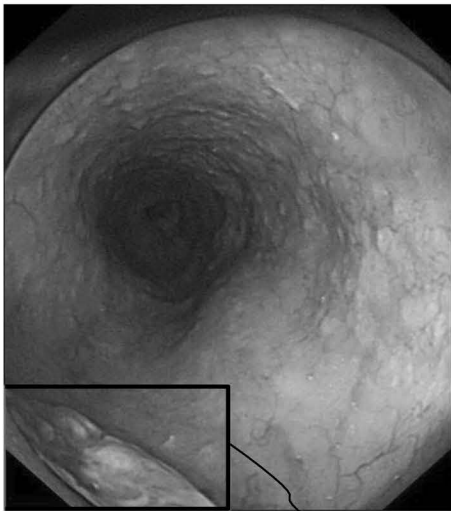


FIG. 32C

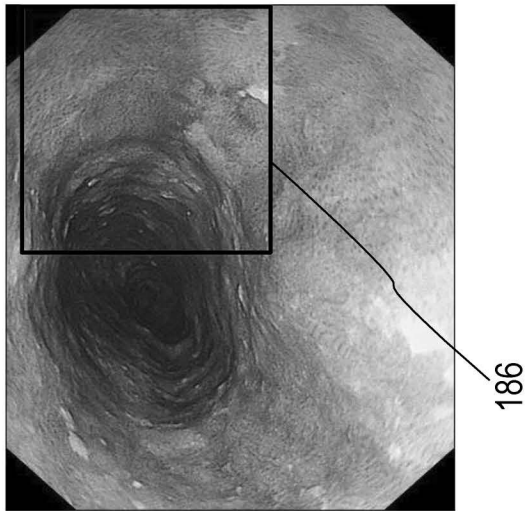


FIG. 32D

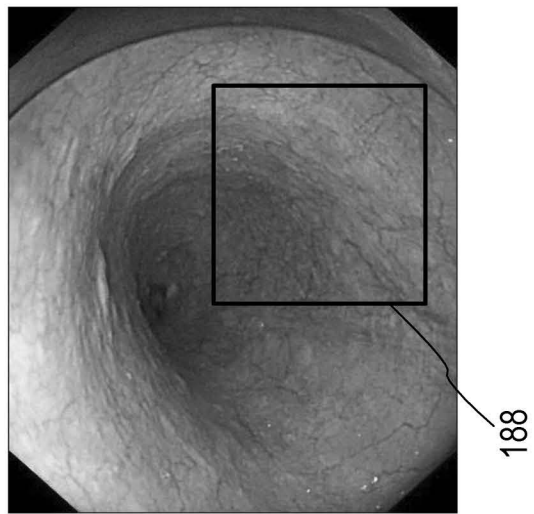


FIG. 32E

