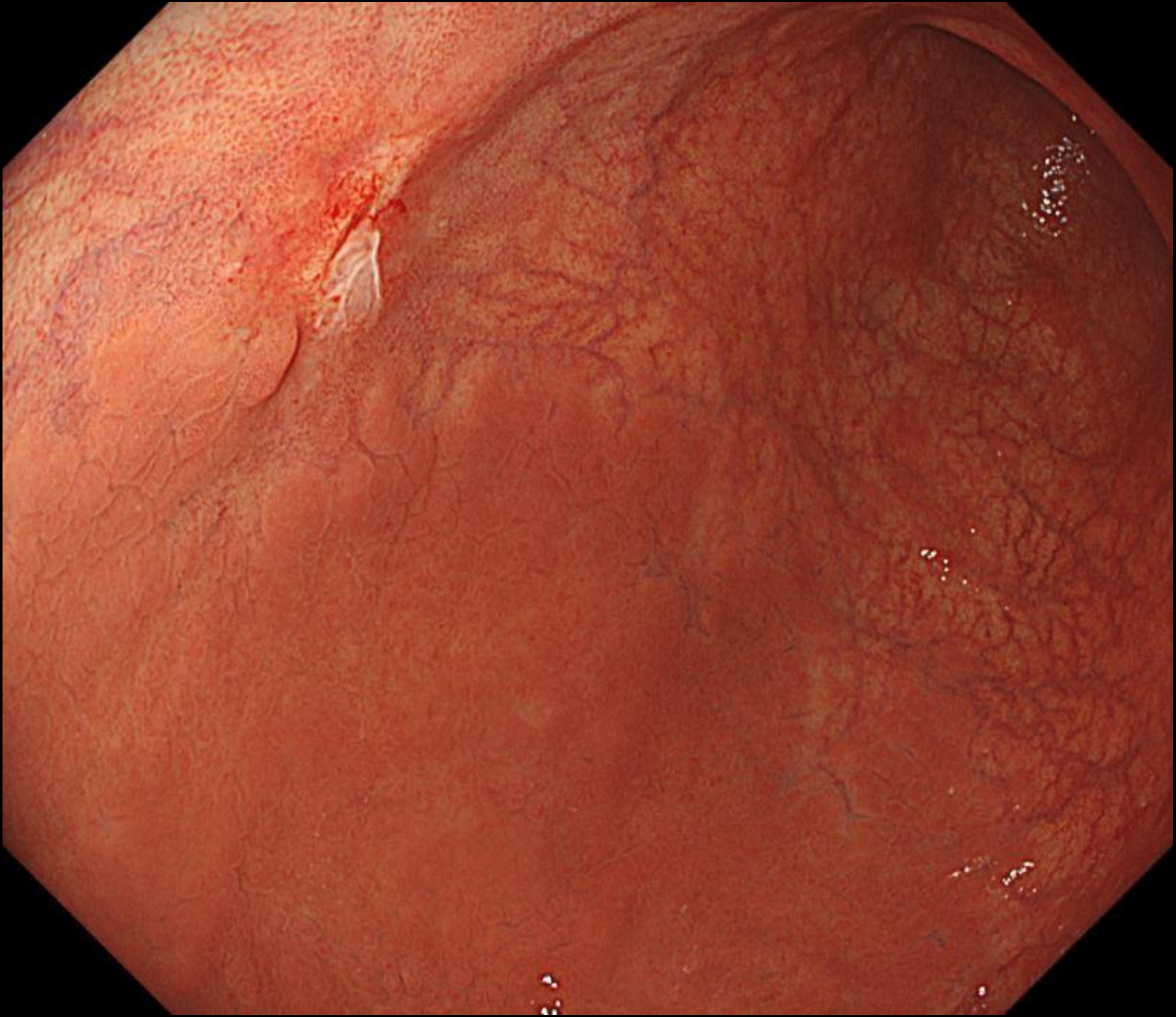
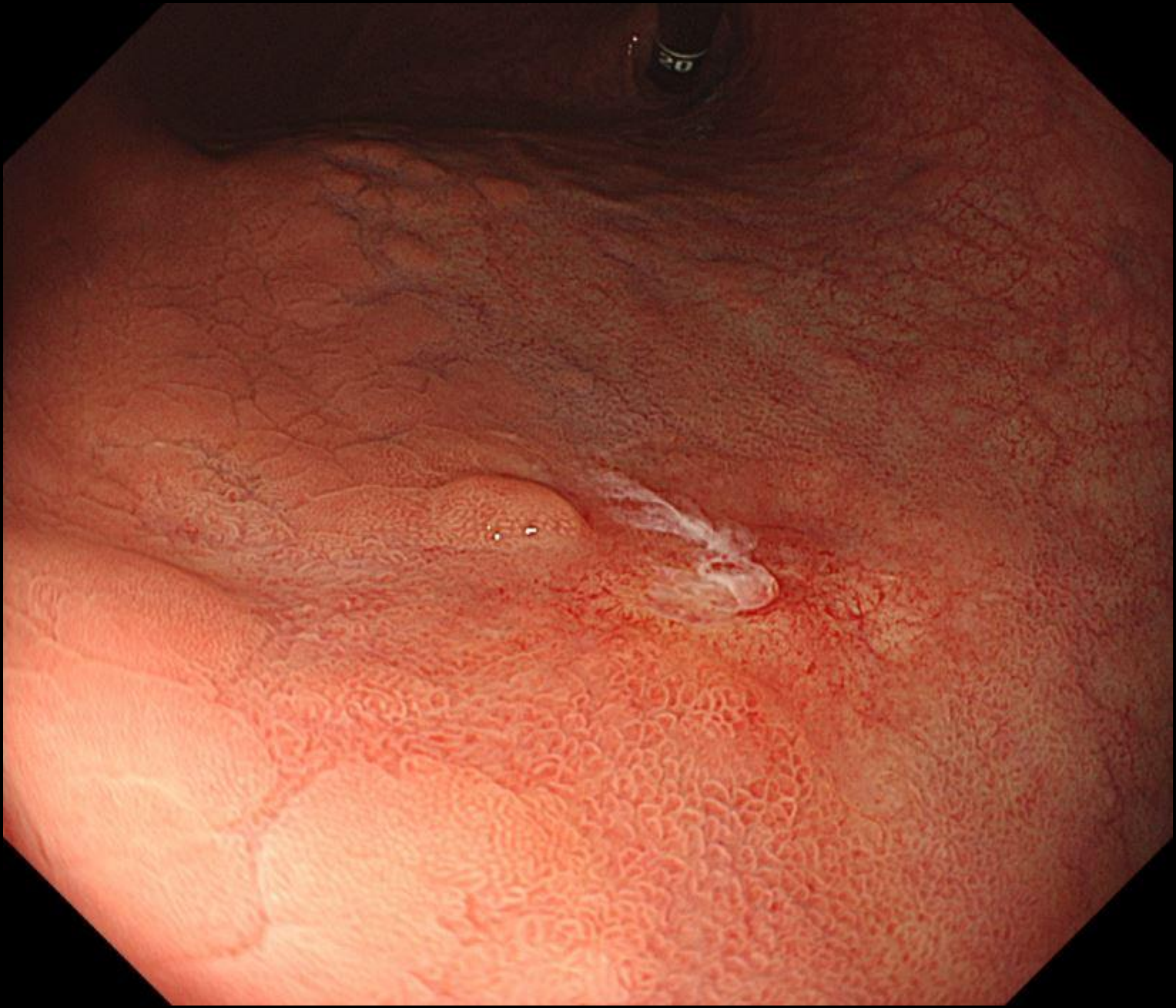
Mapping
胃

担当　小坂　太郎

白色光
（4枚）

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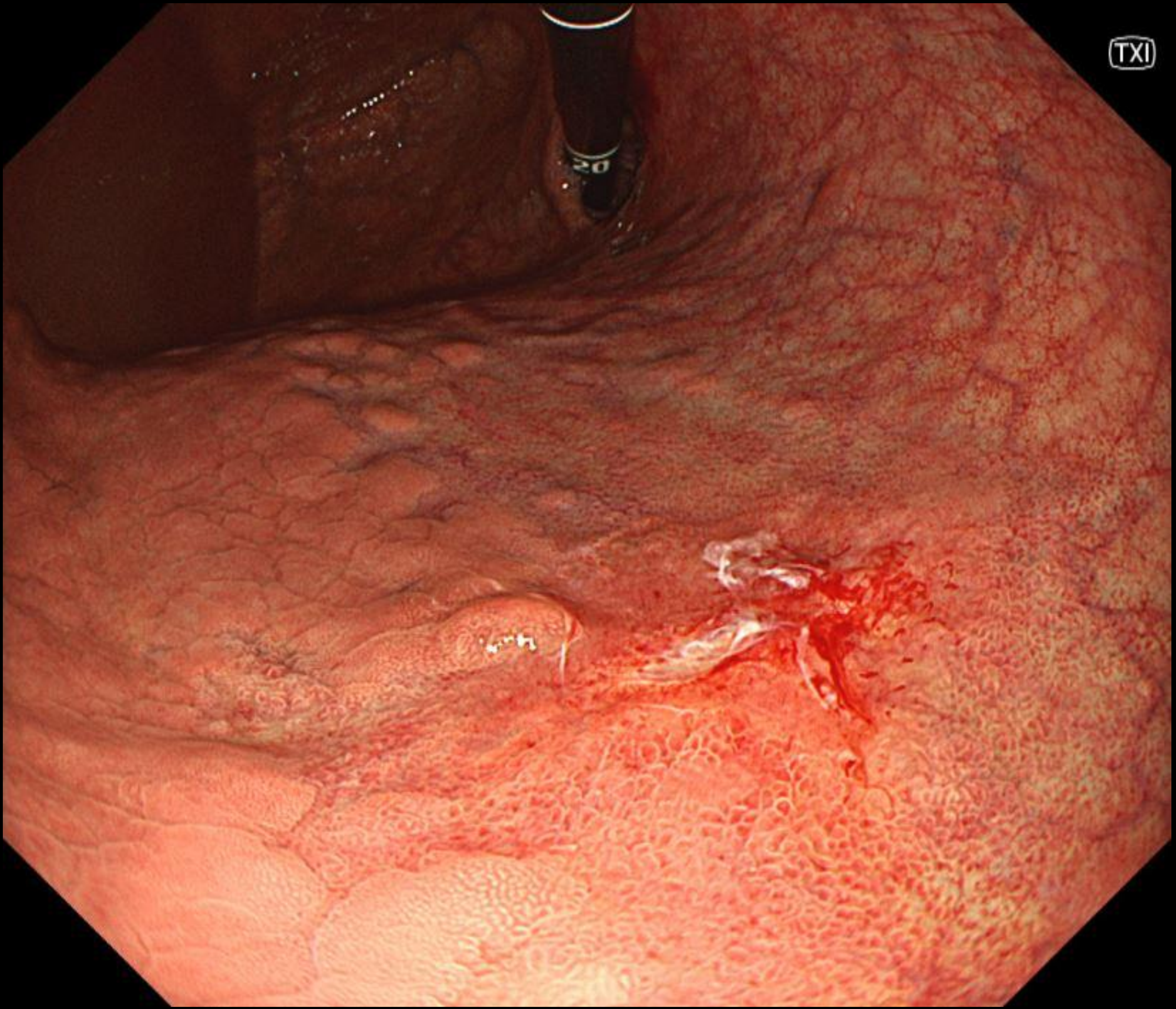
TXI
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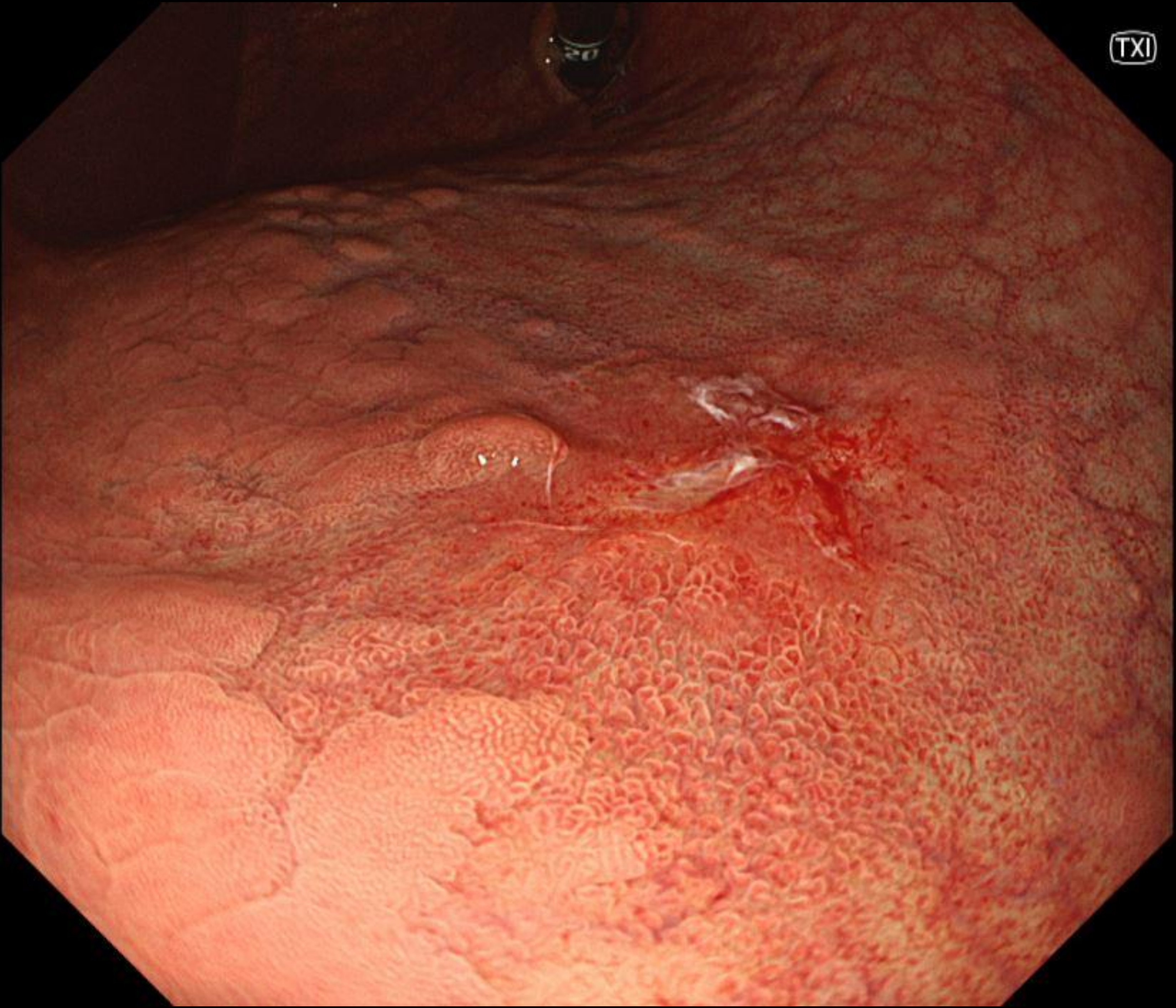
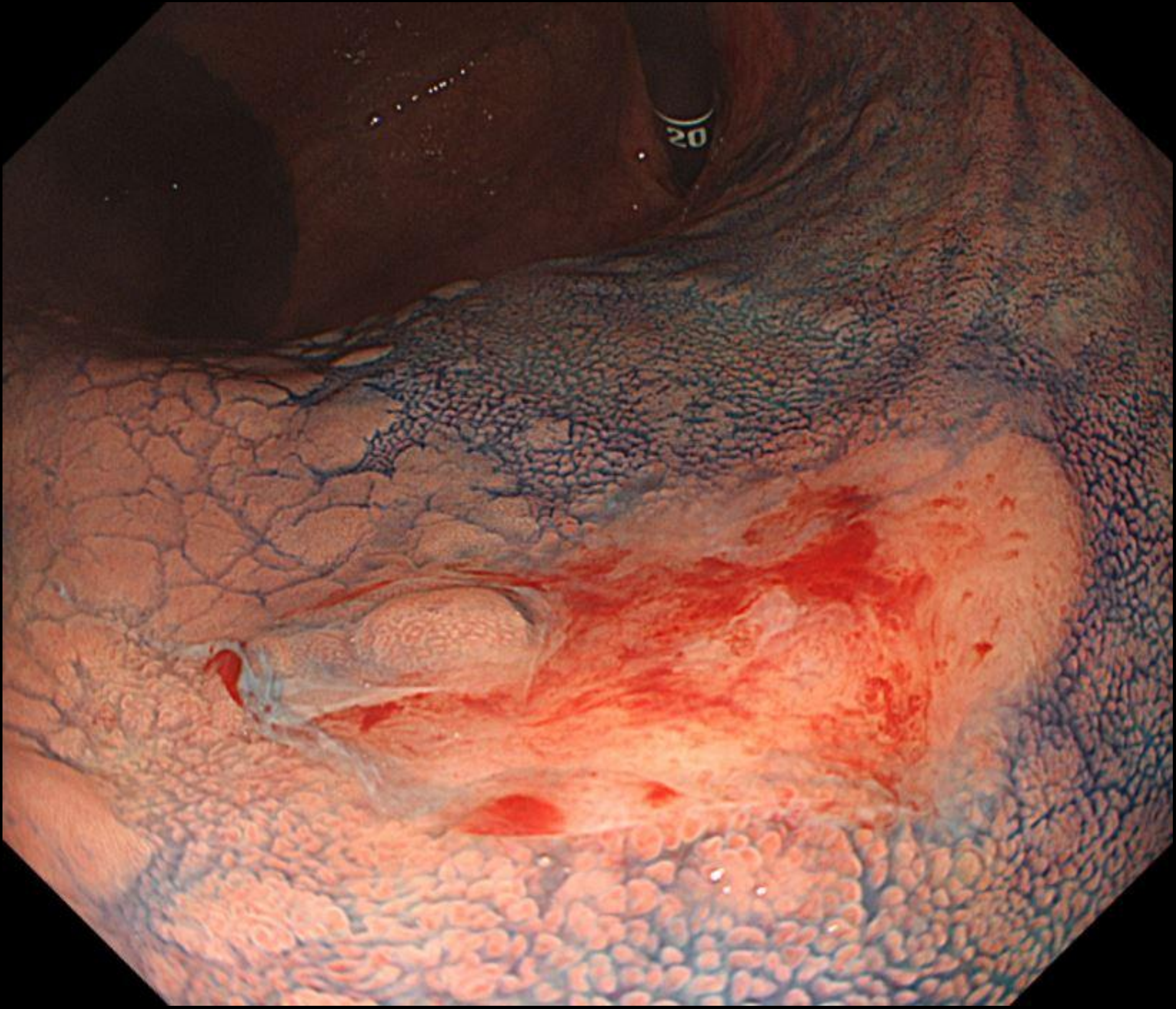

TXI

インジゴカルミン散布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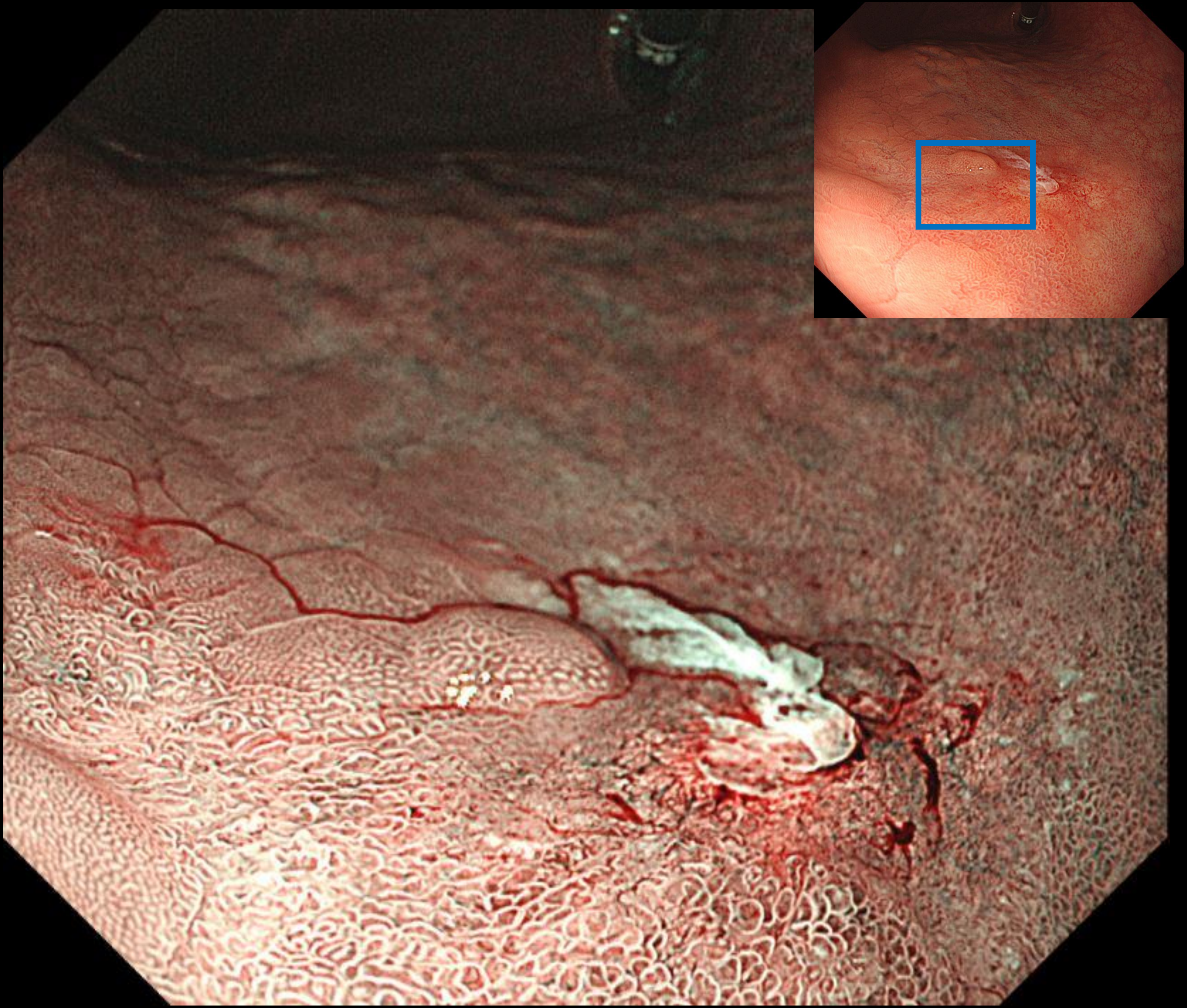
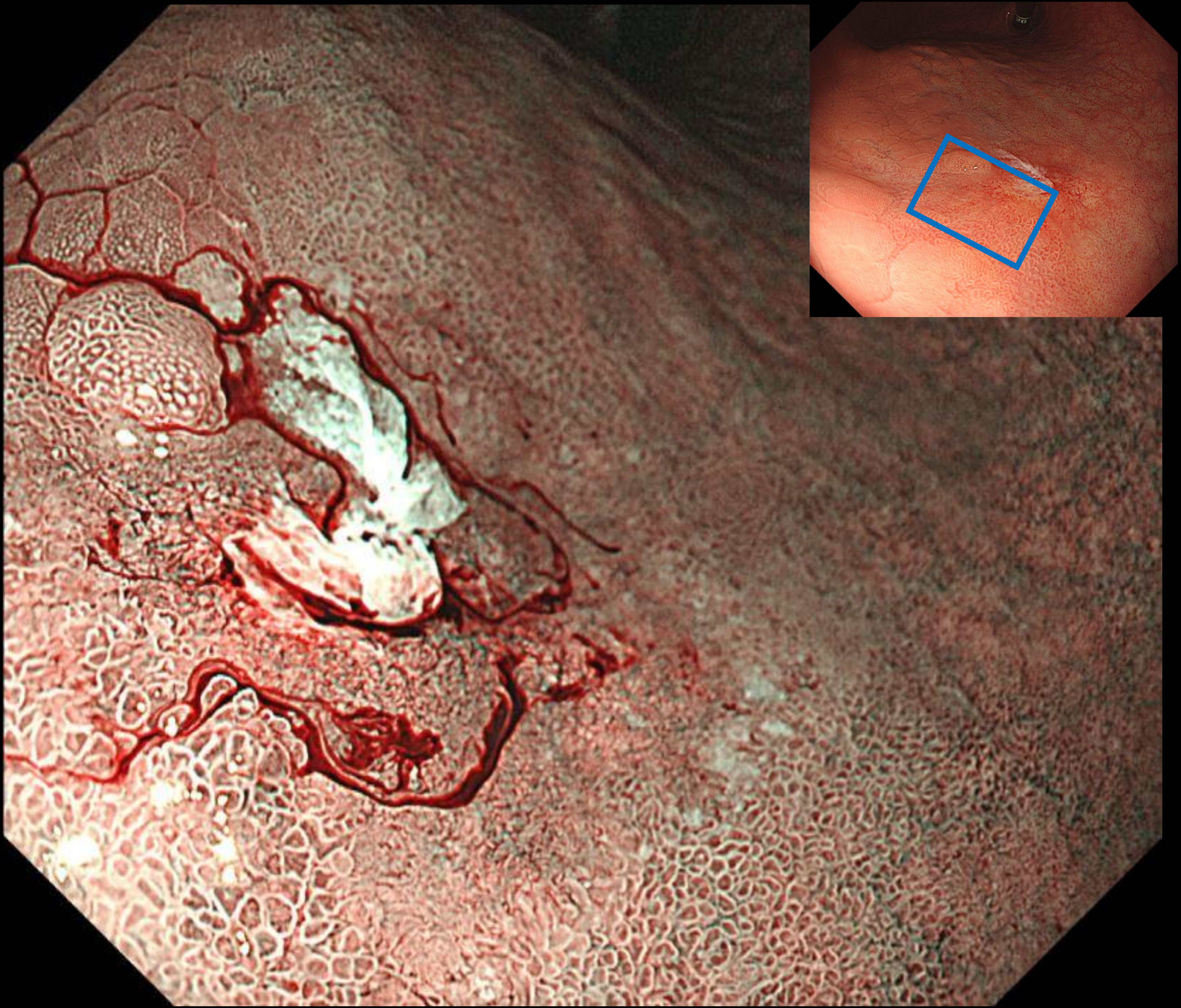
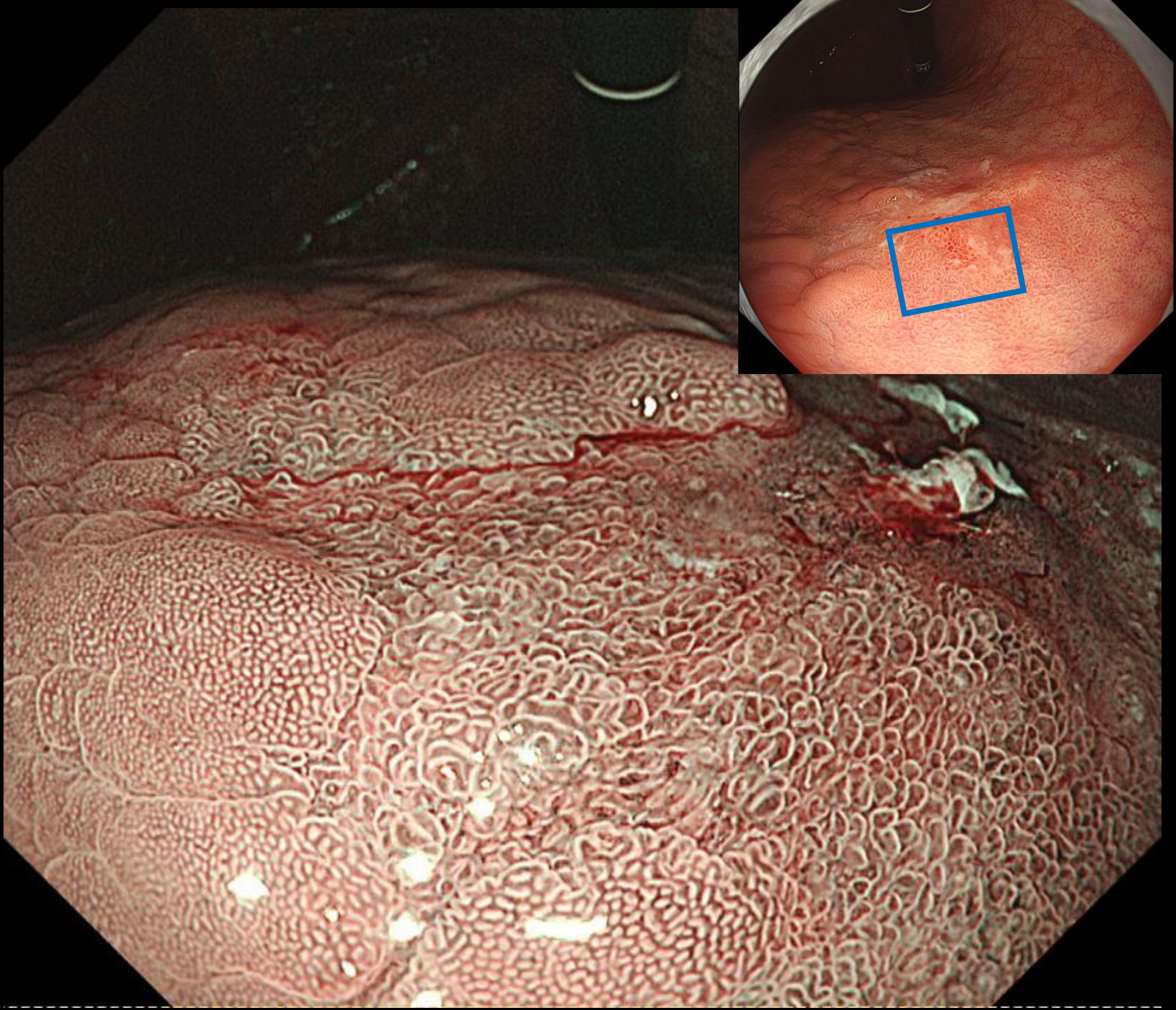
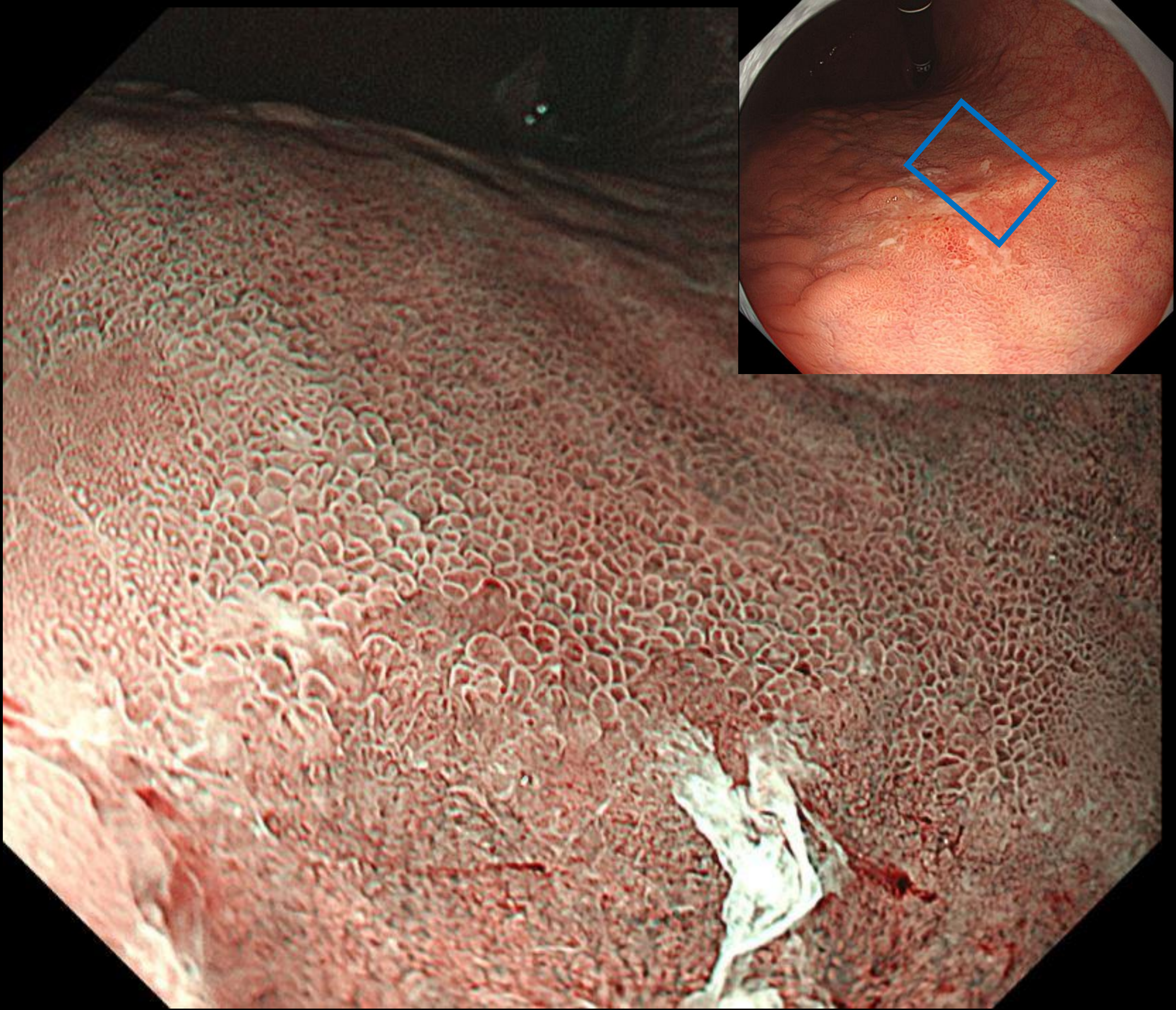
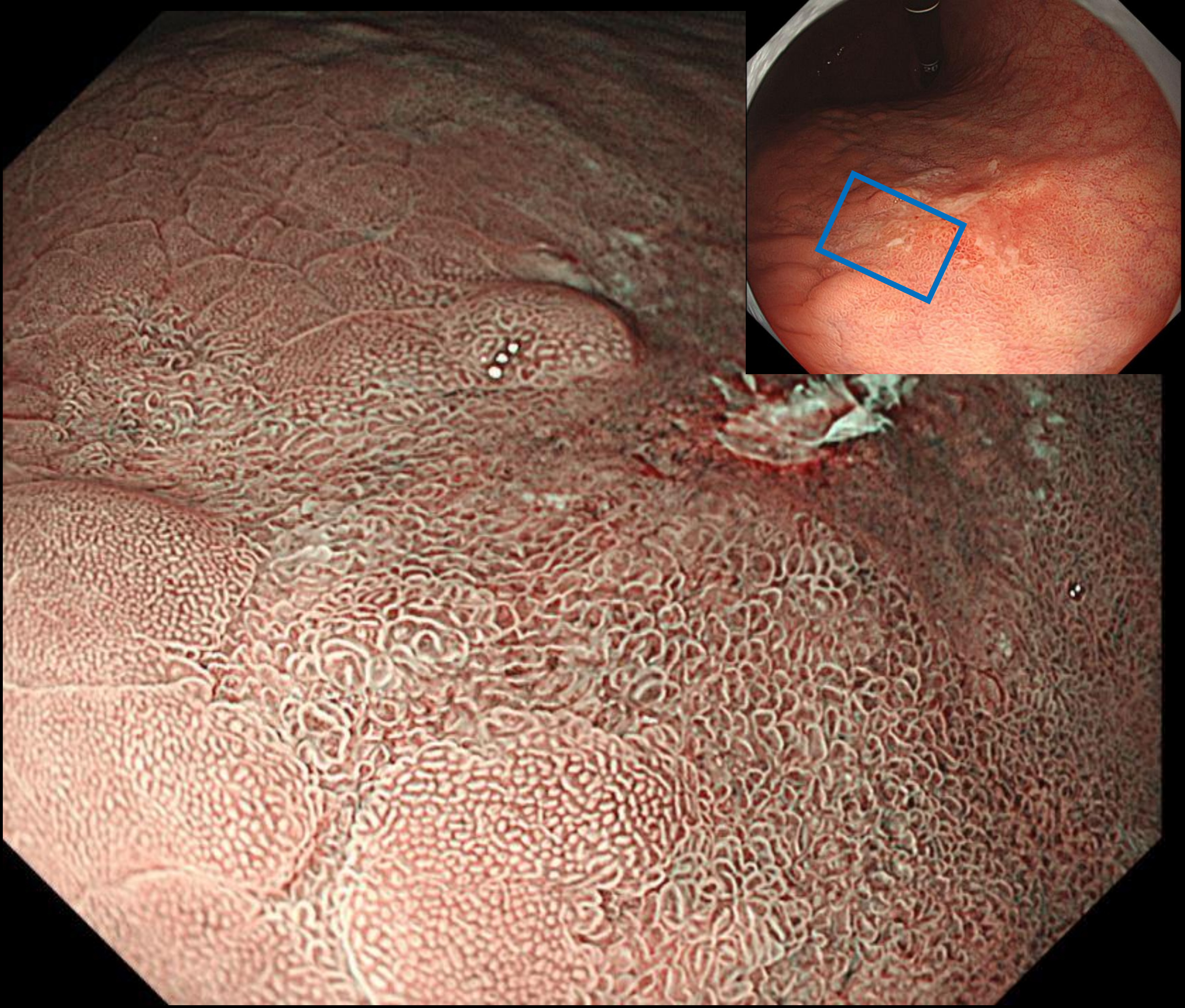
NBI
（7枚）

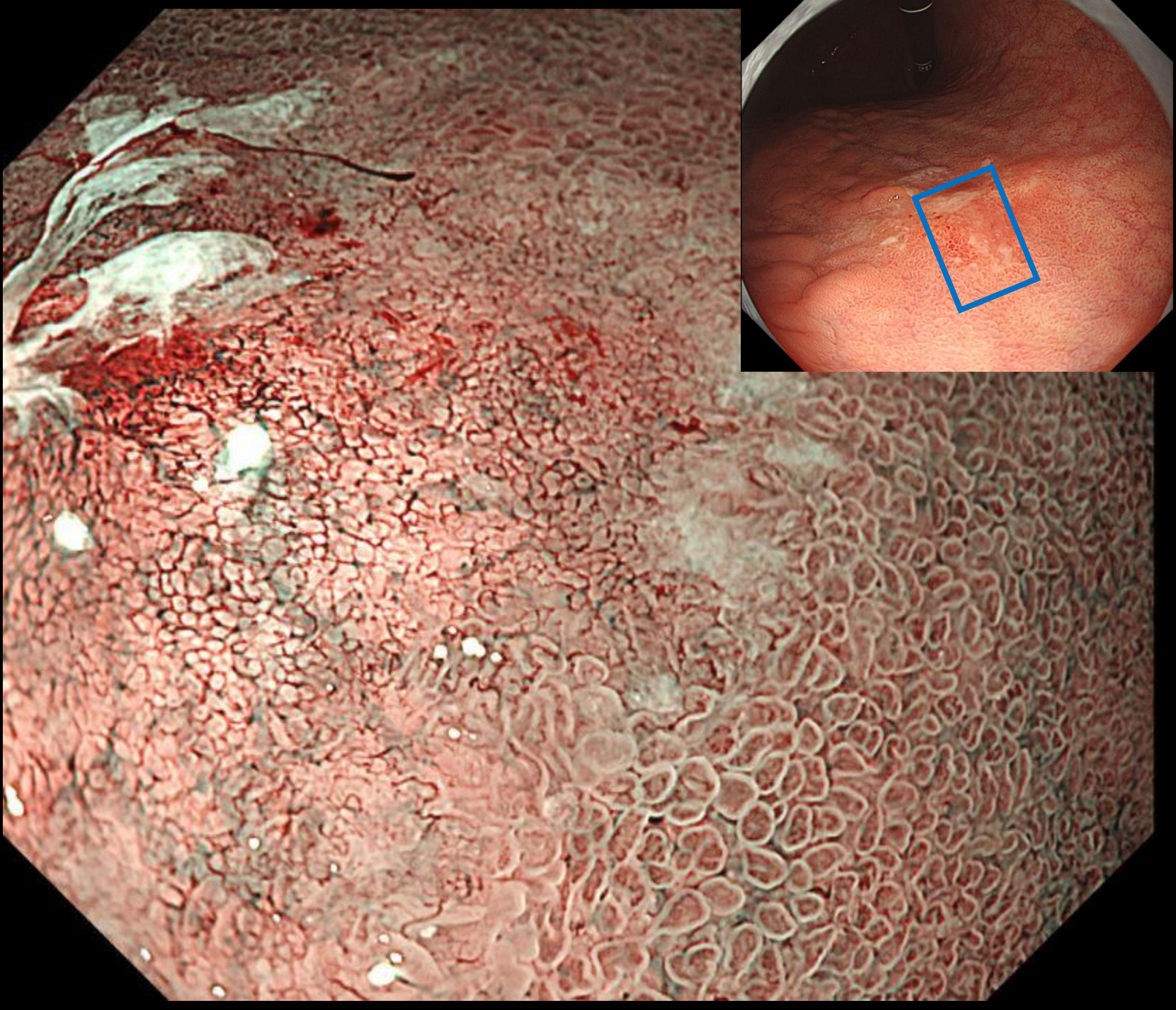


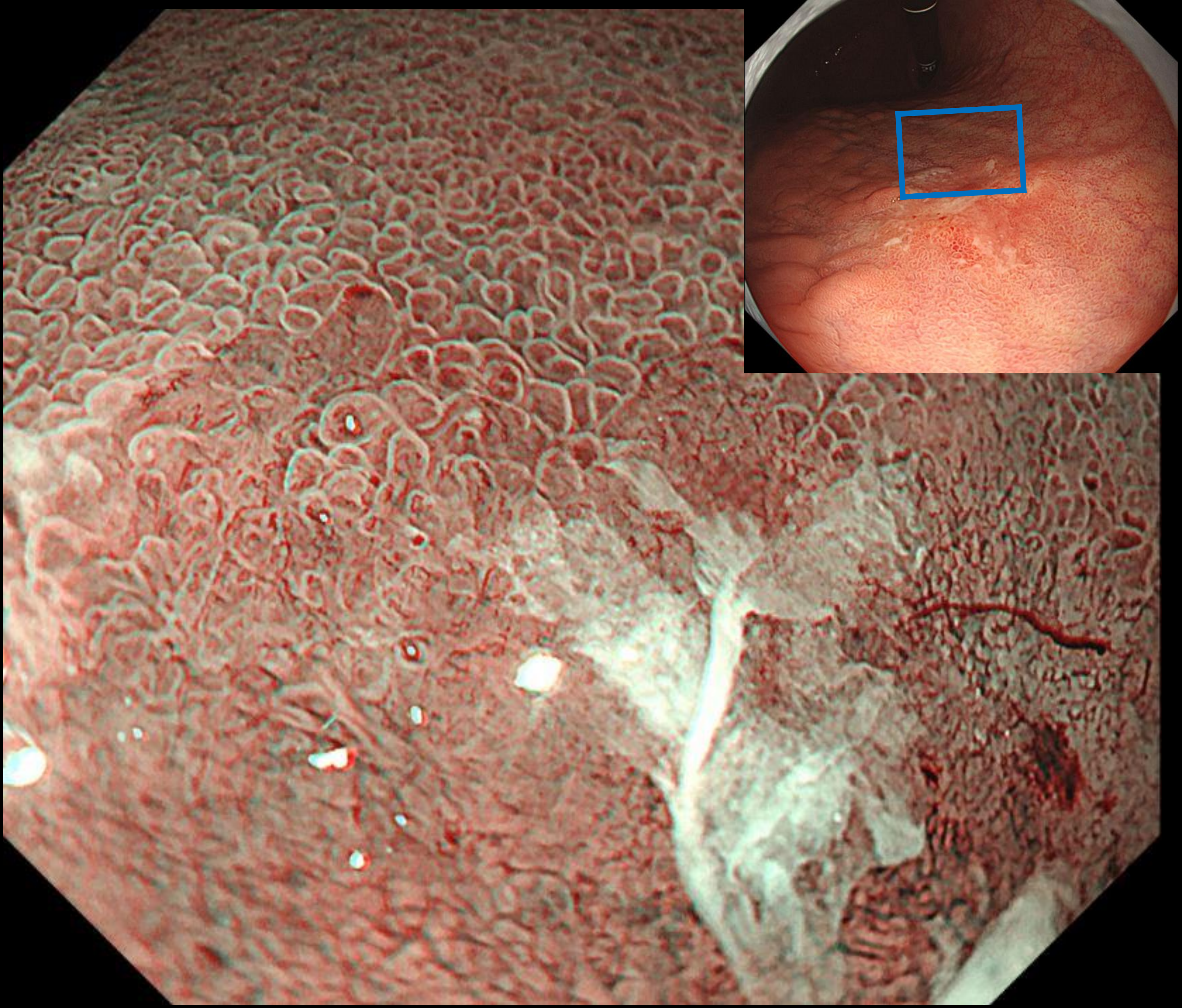












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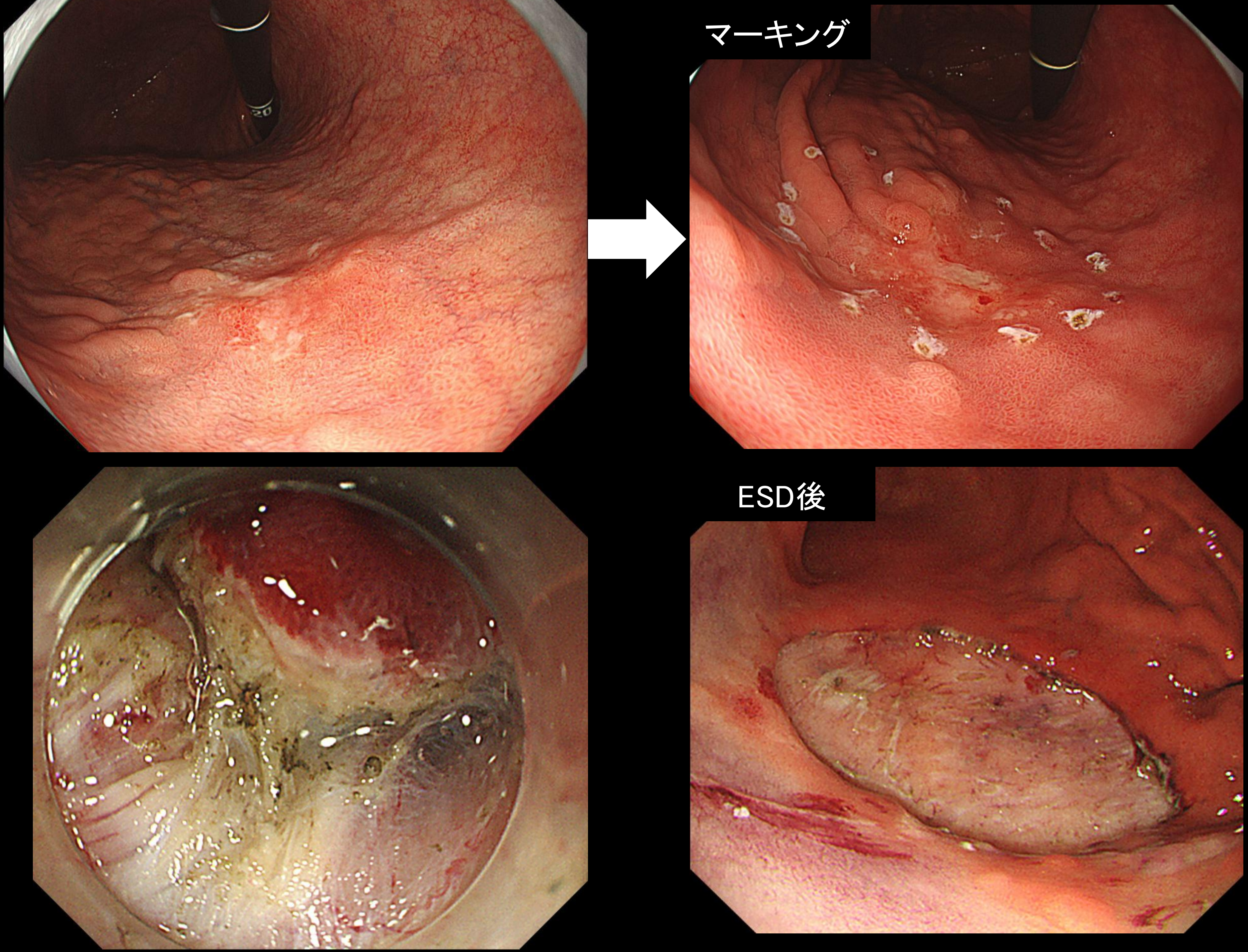
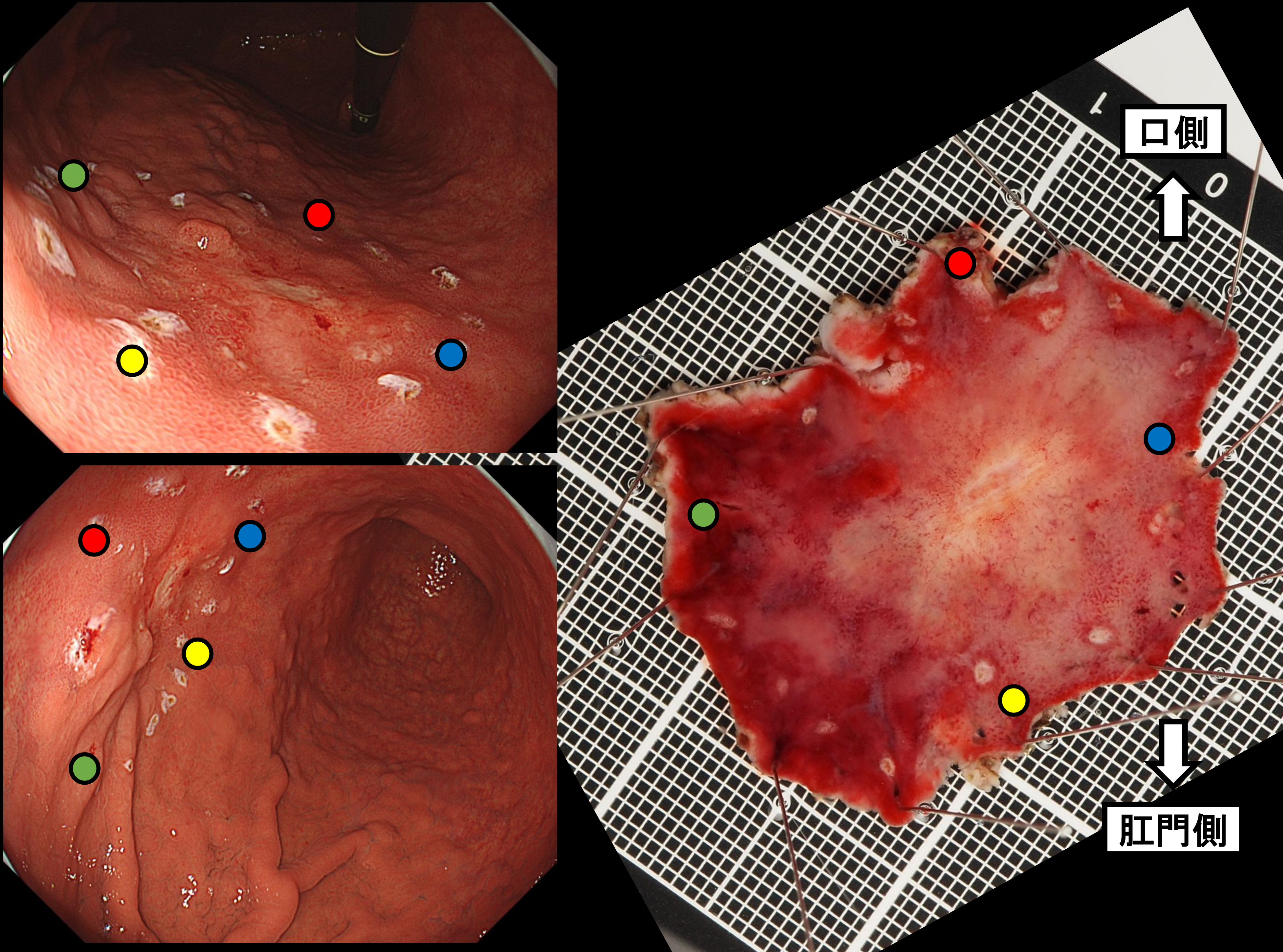

マーキング
ESD後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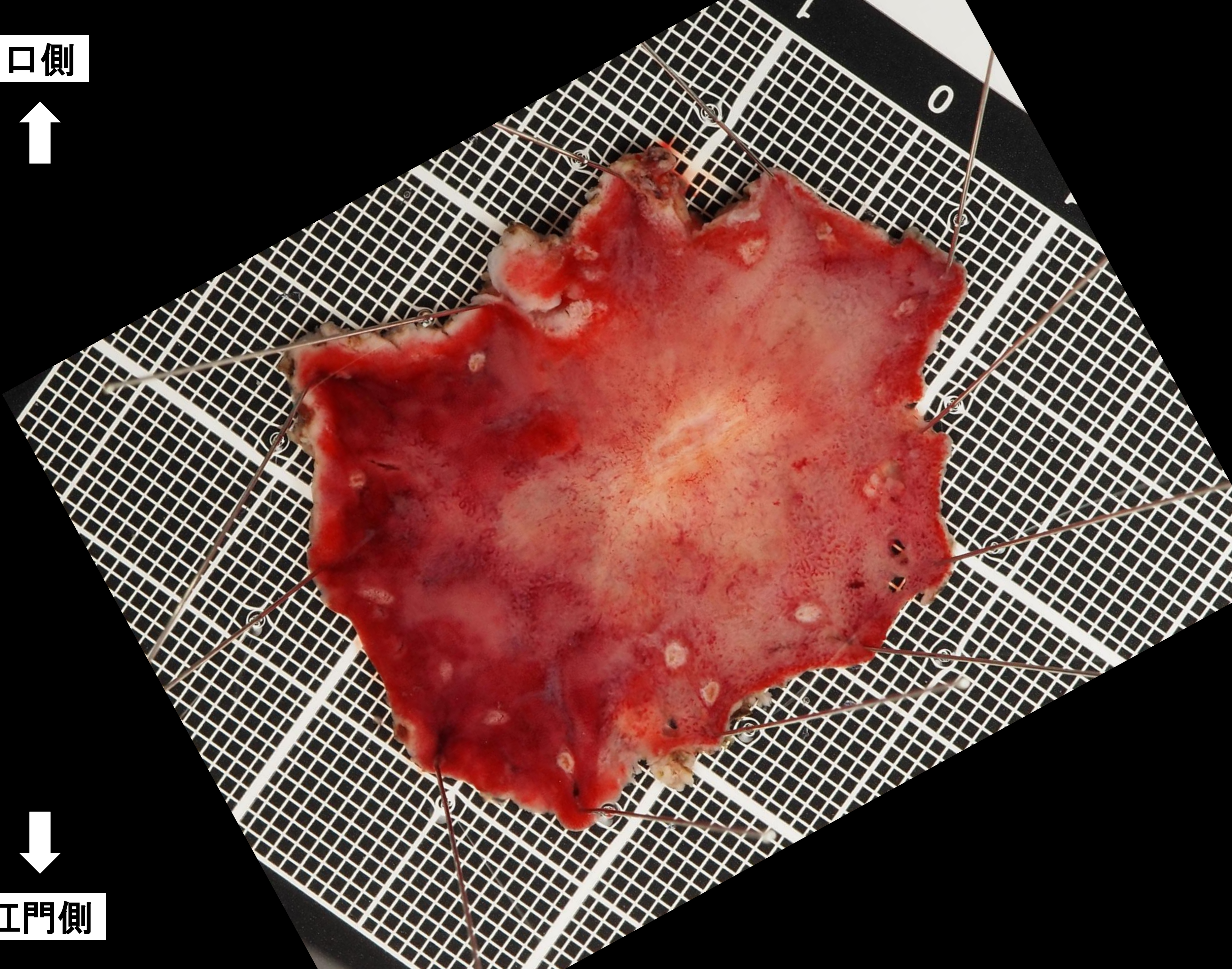
肛門側

口側



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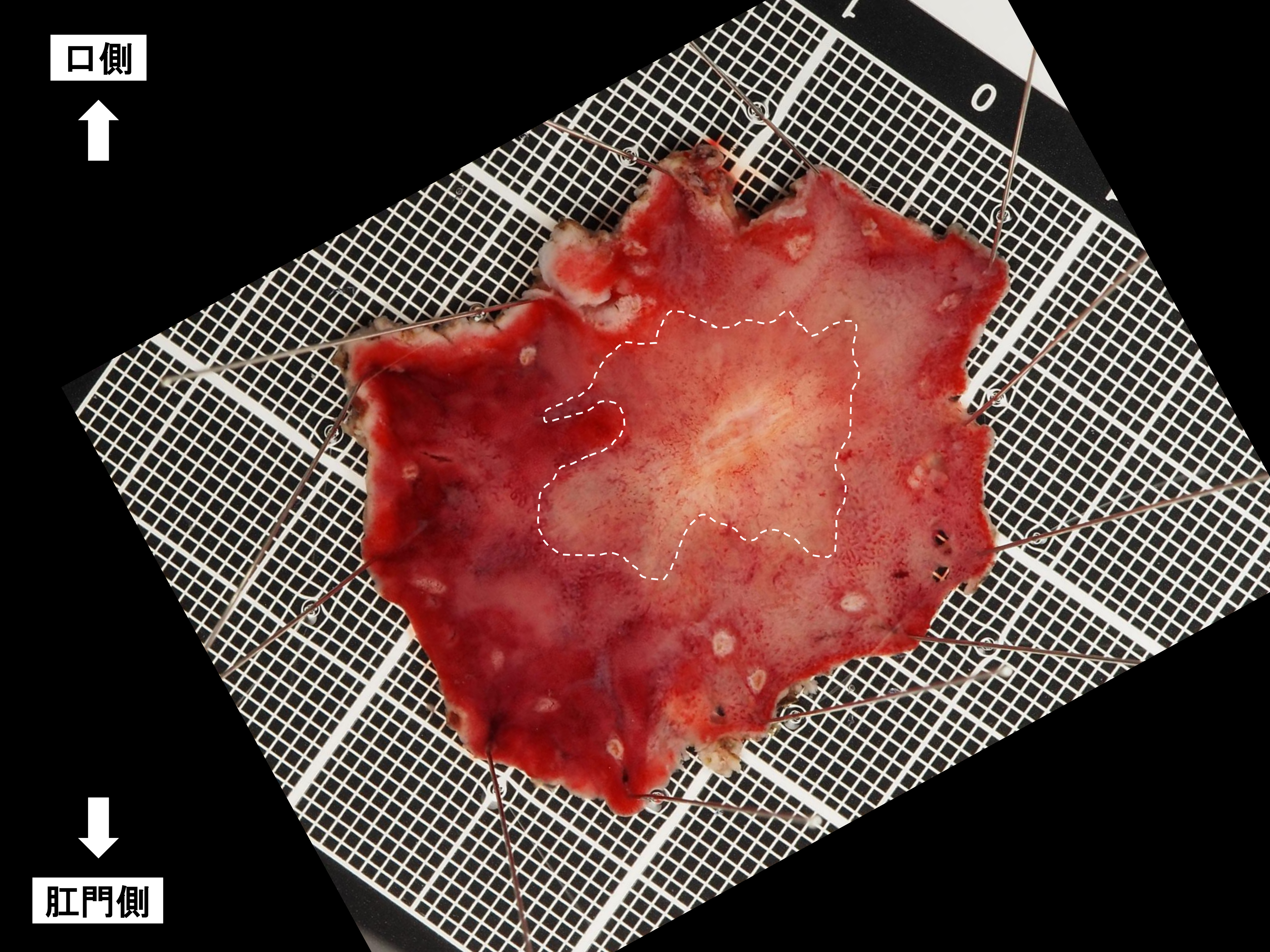
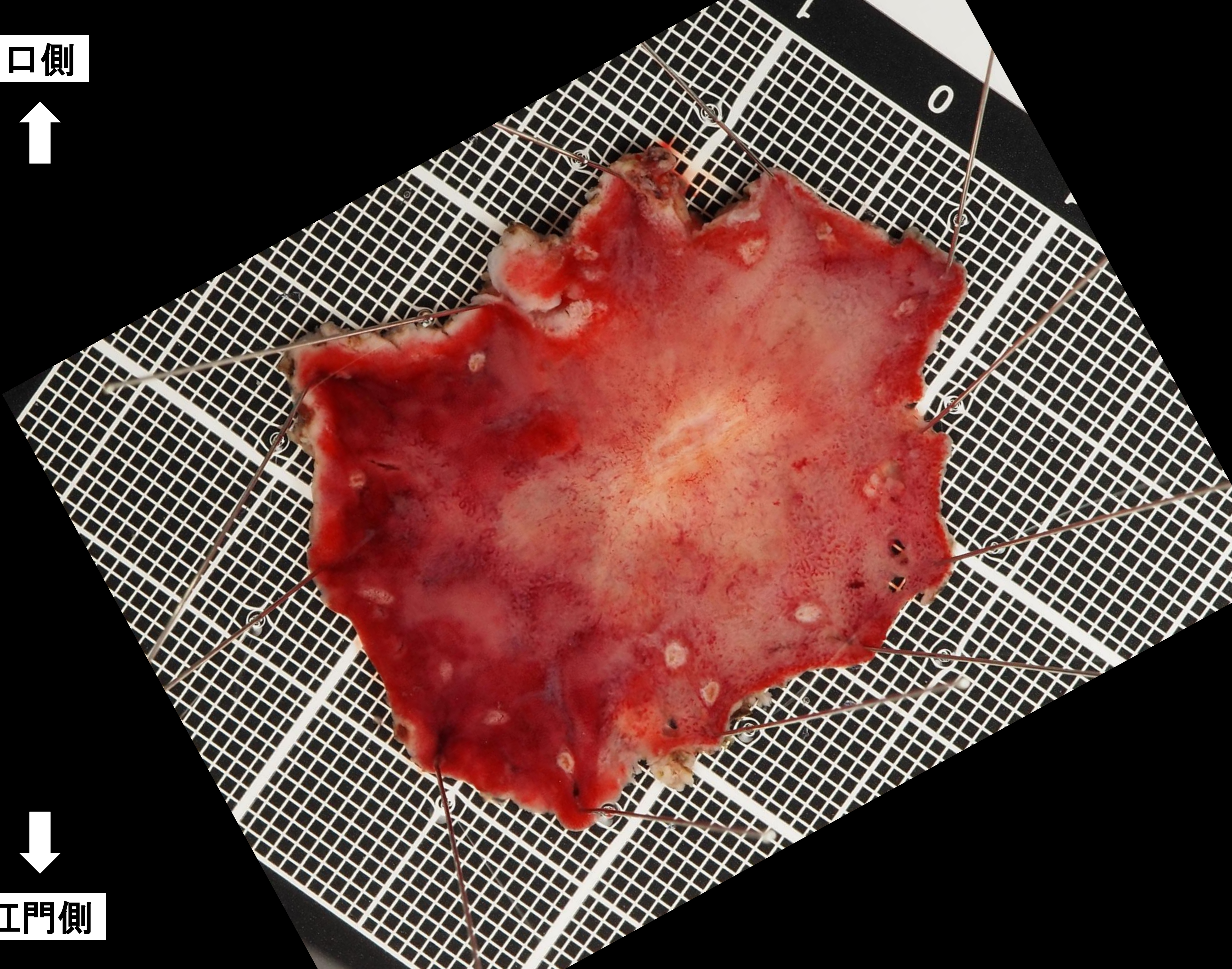

口側
肛門側

口側



肛門側

口側

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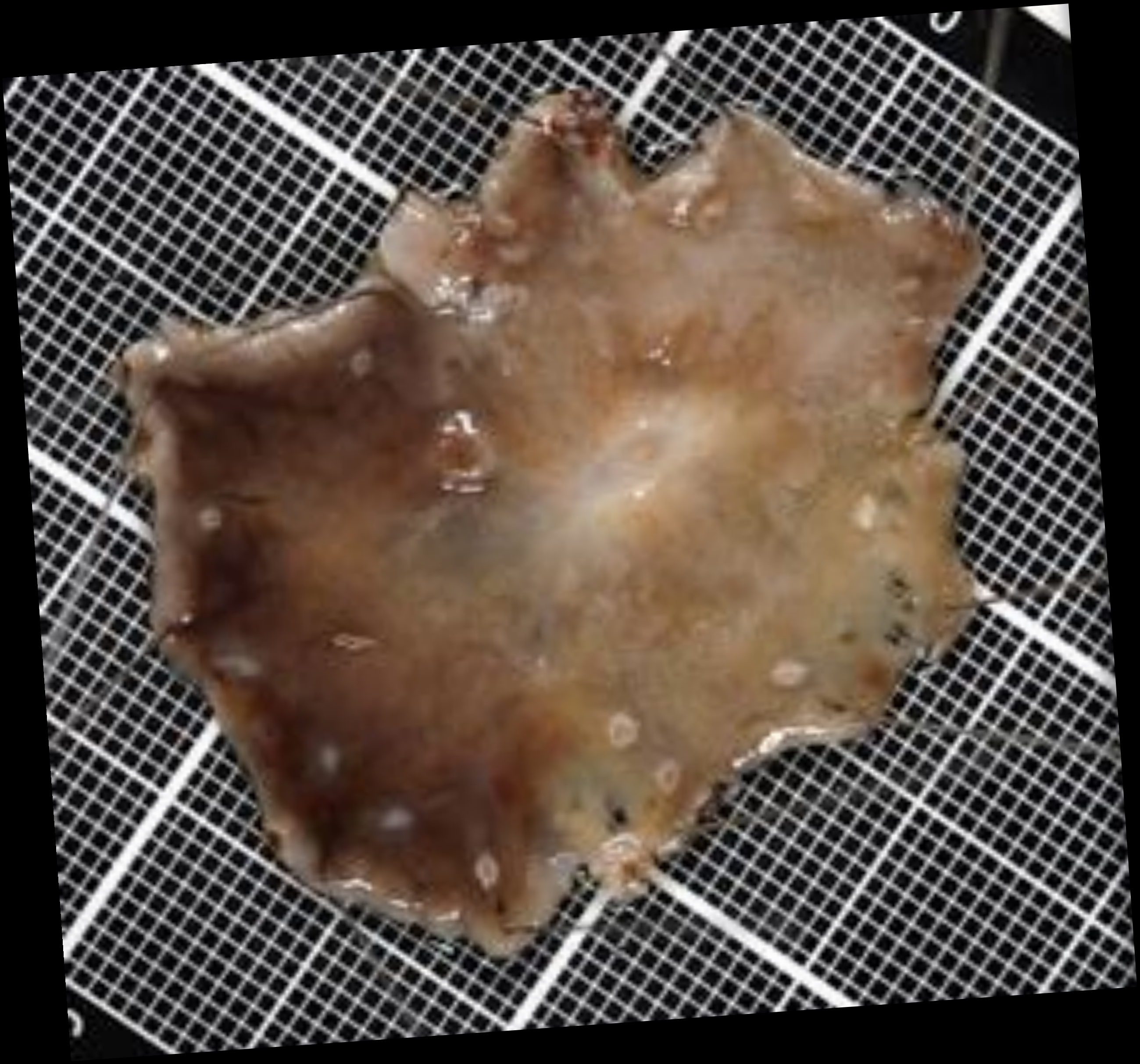

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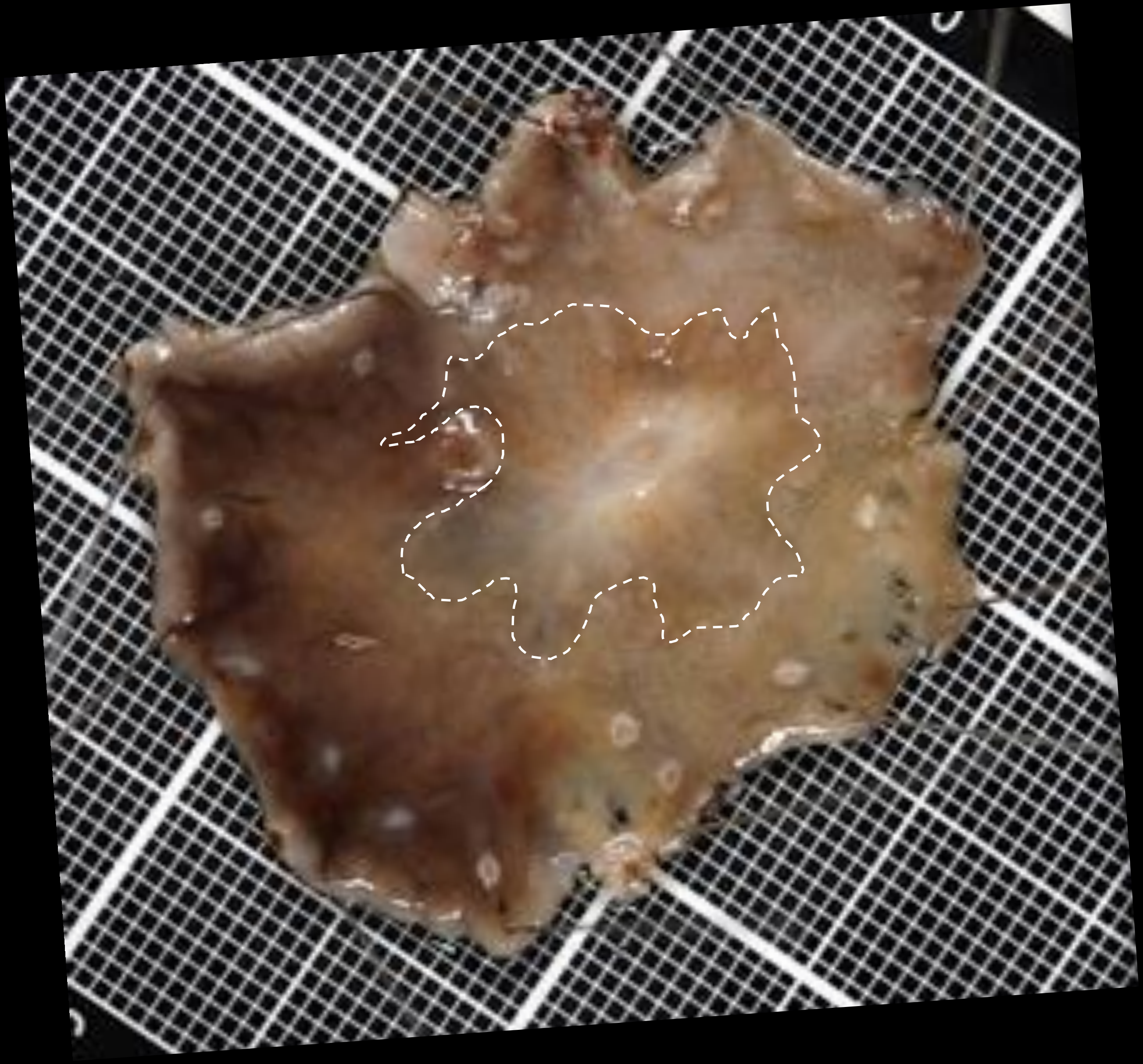
肛門側

口側



肛門側

口側

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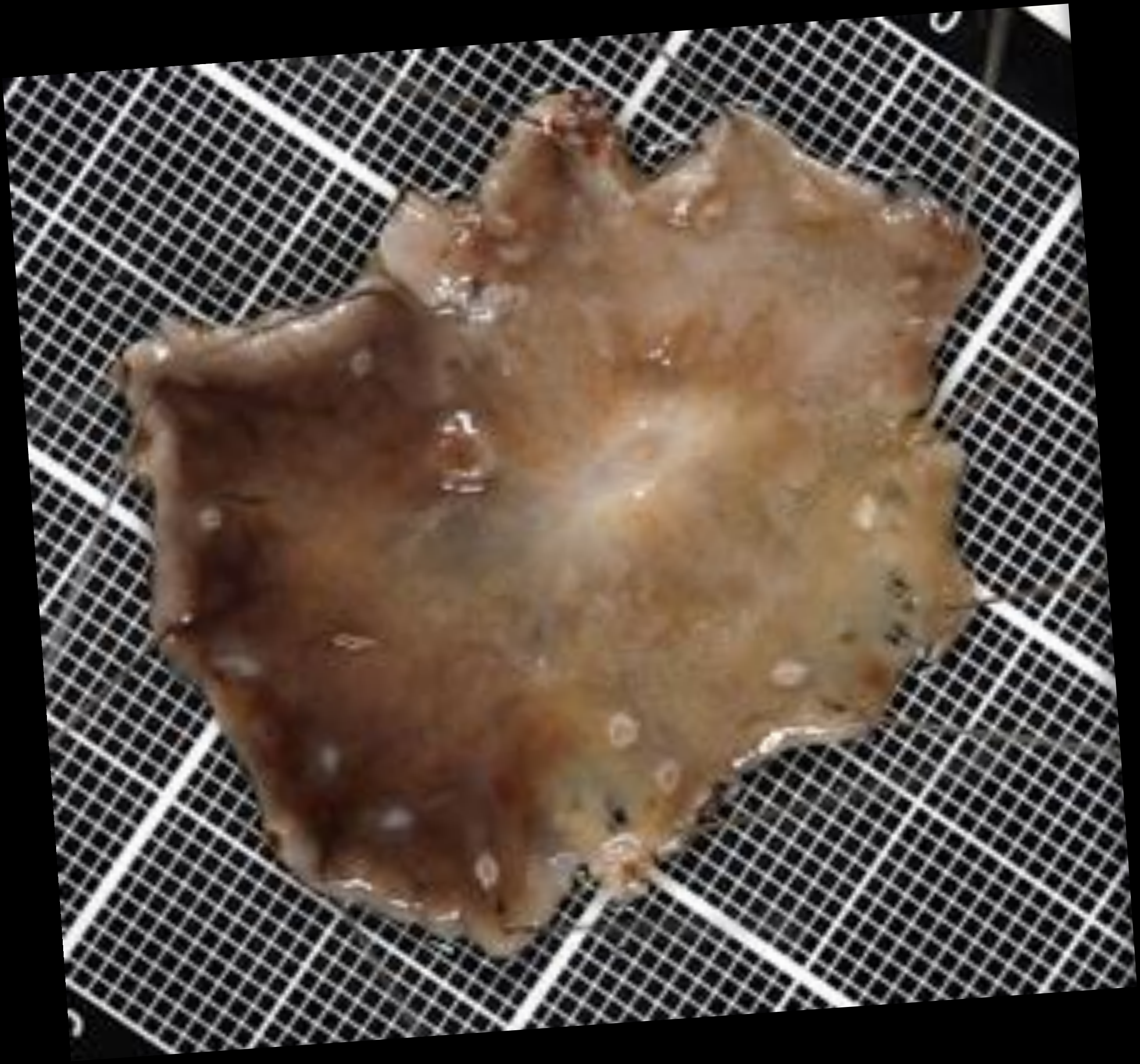

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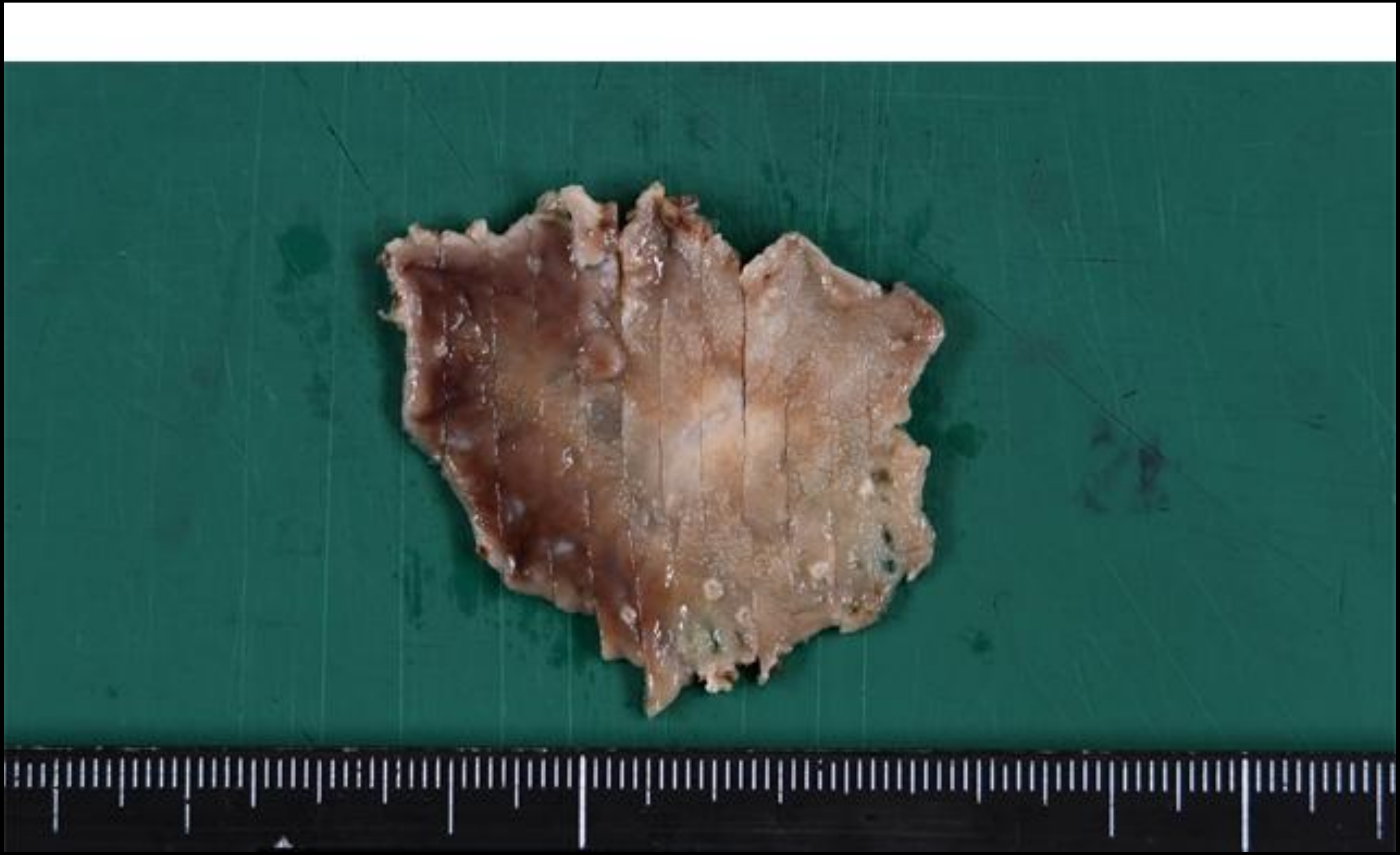

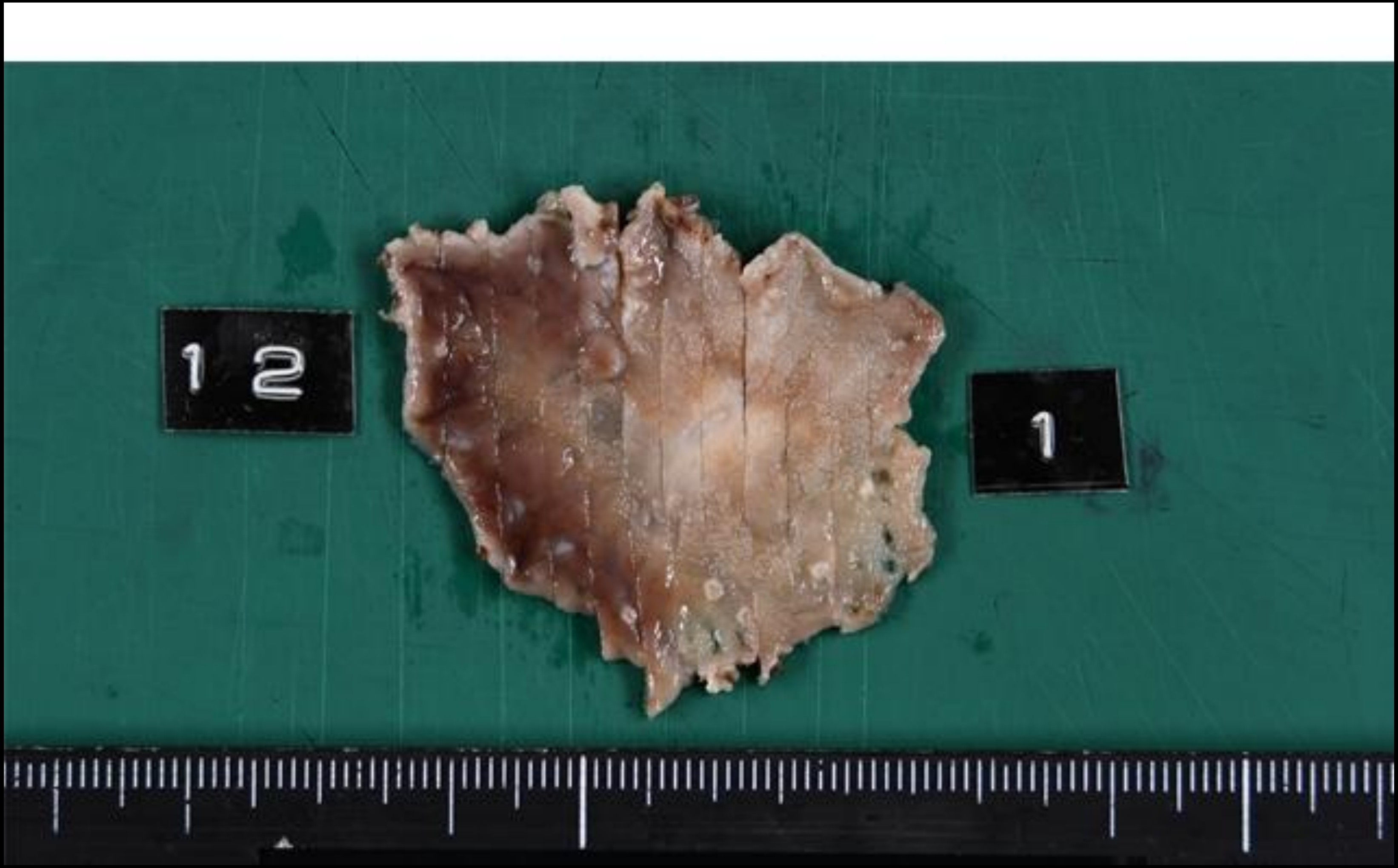
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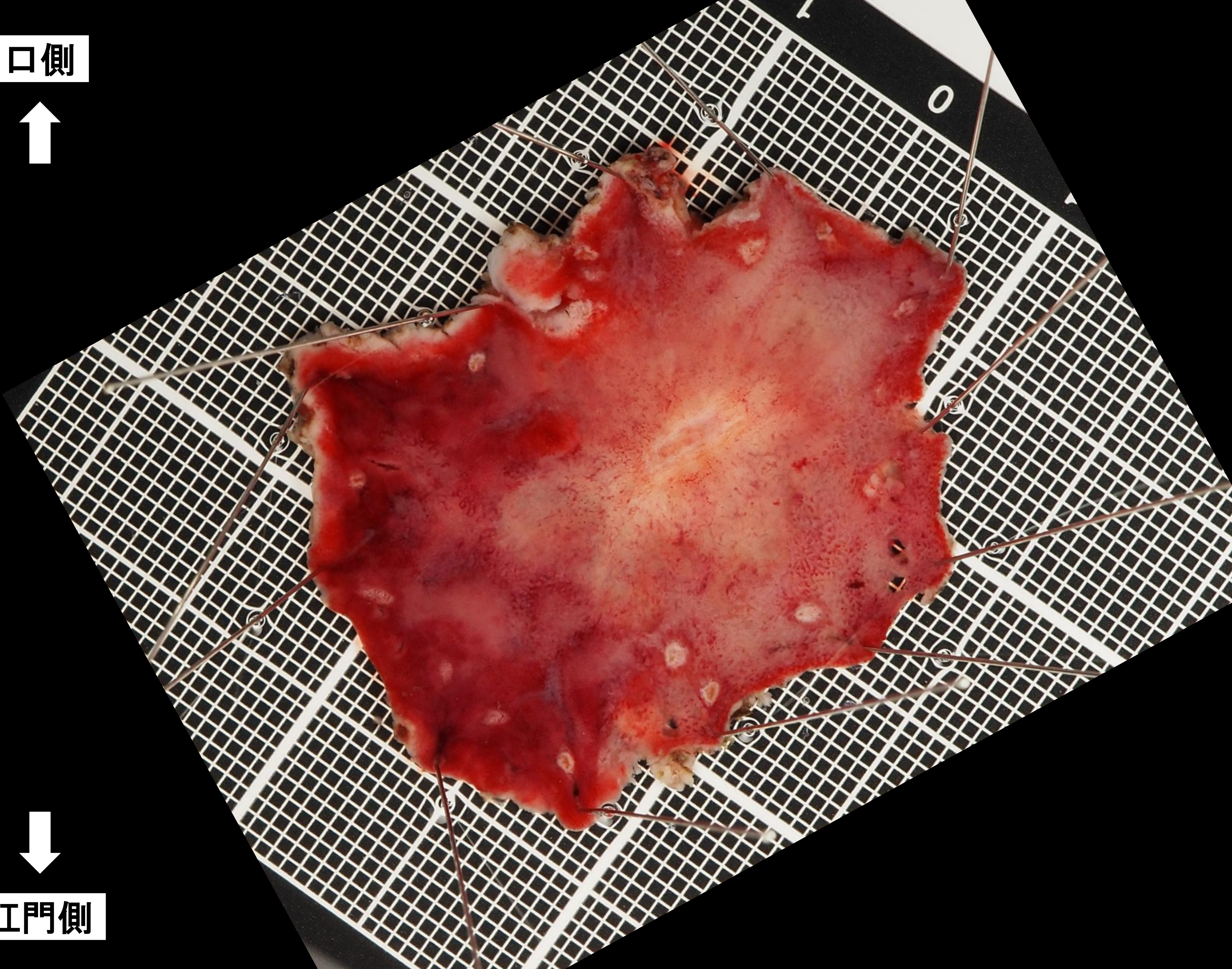
口側



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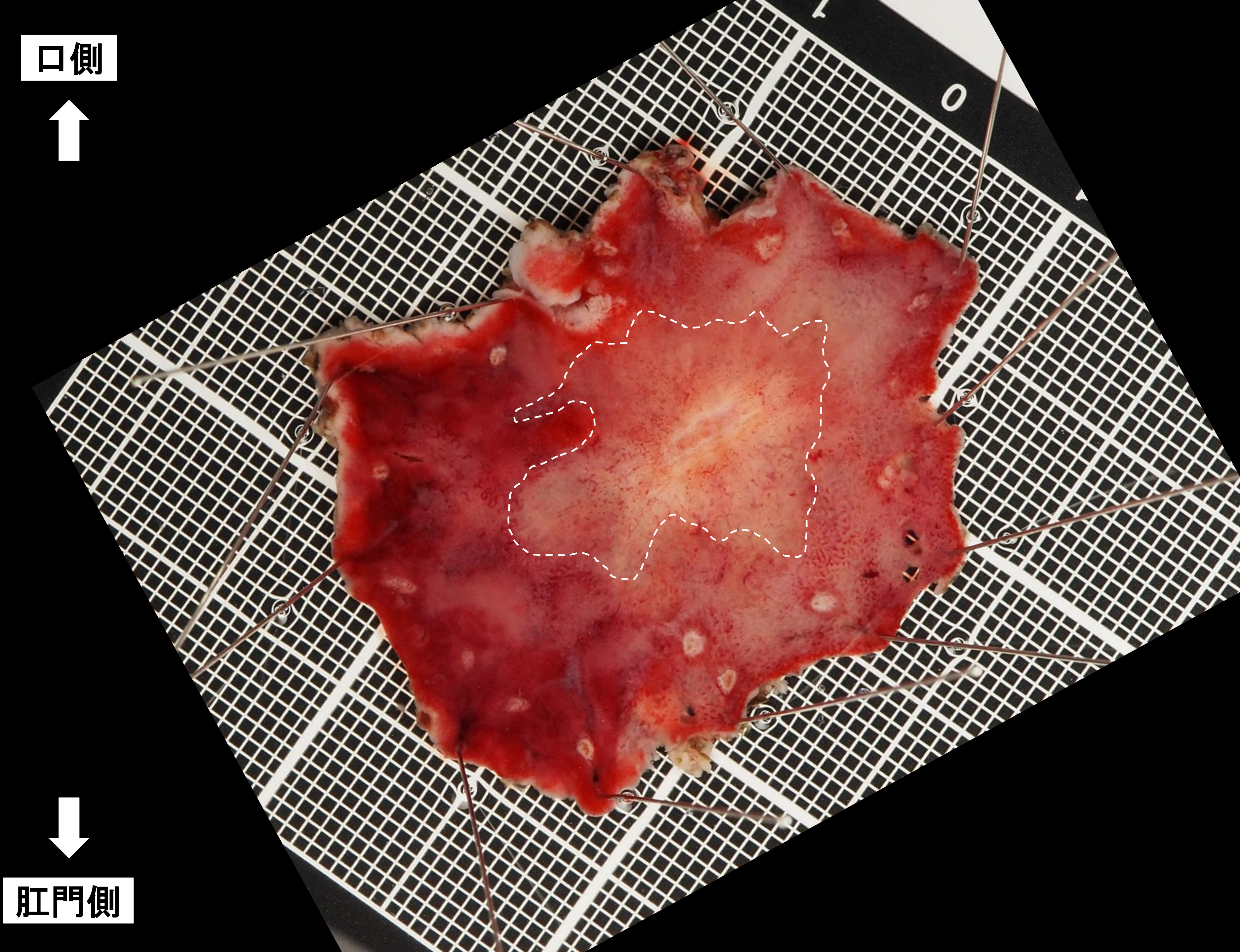
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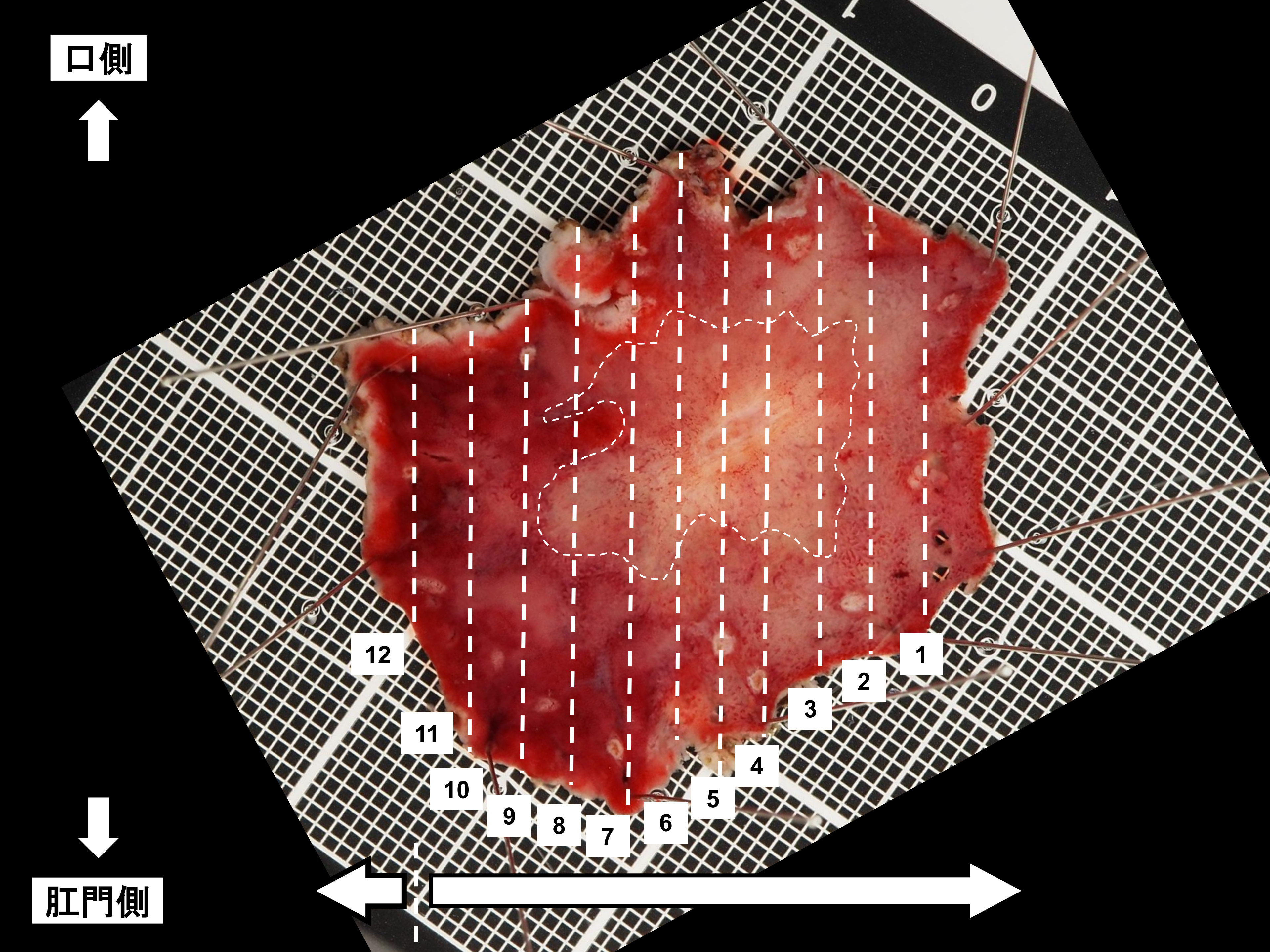
肛門側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肛門側
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口側

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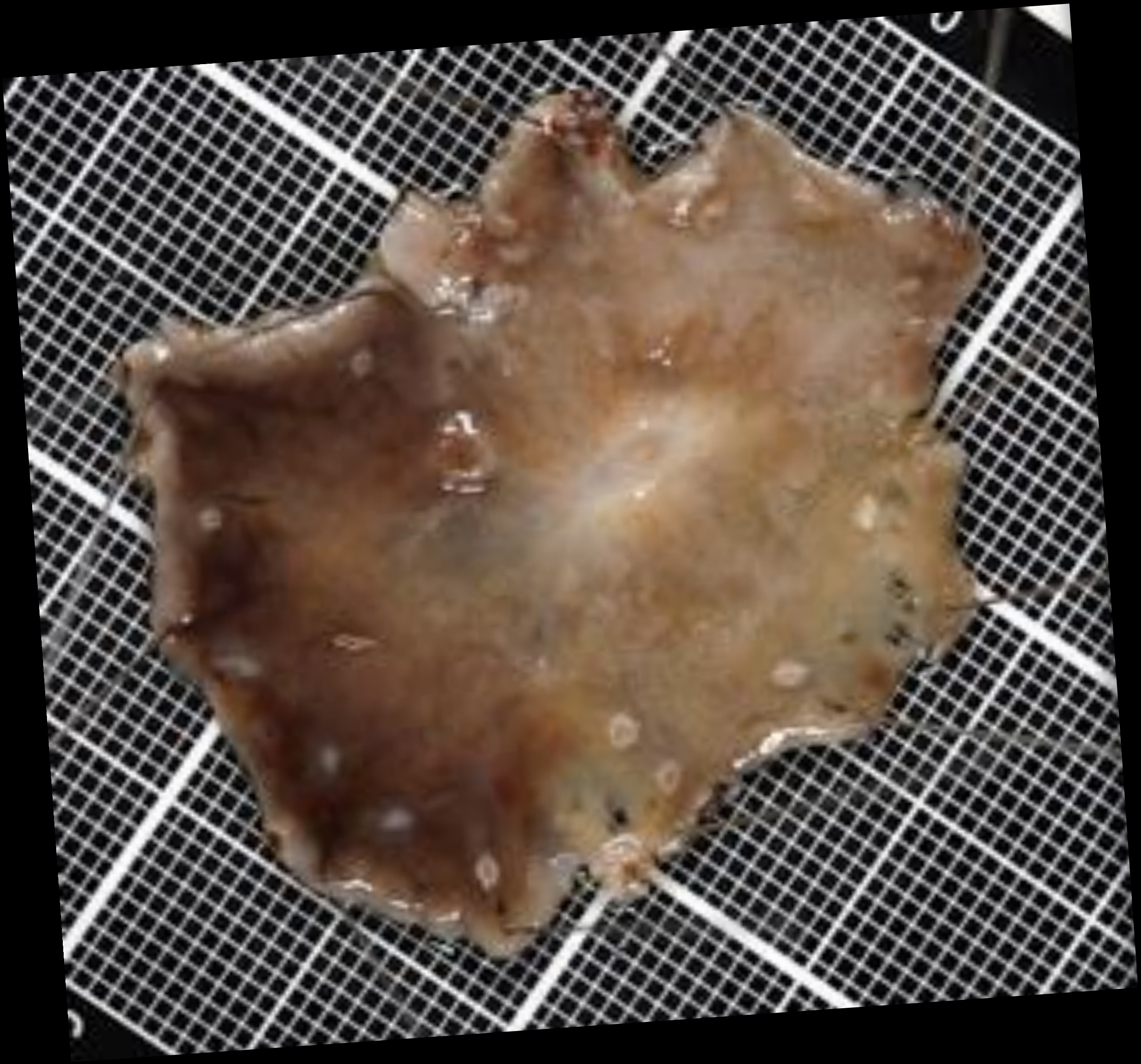

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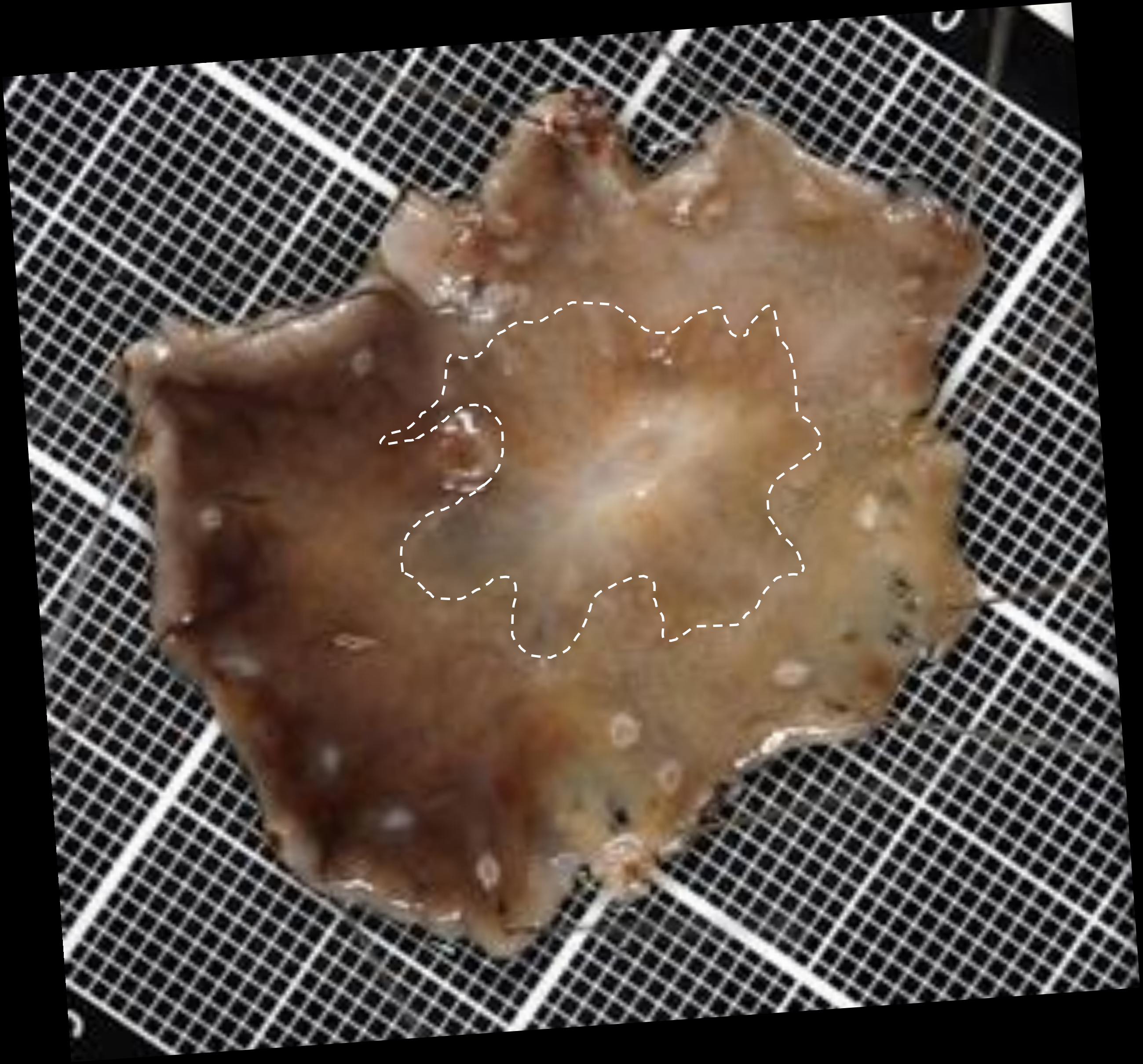
肛門側

口側



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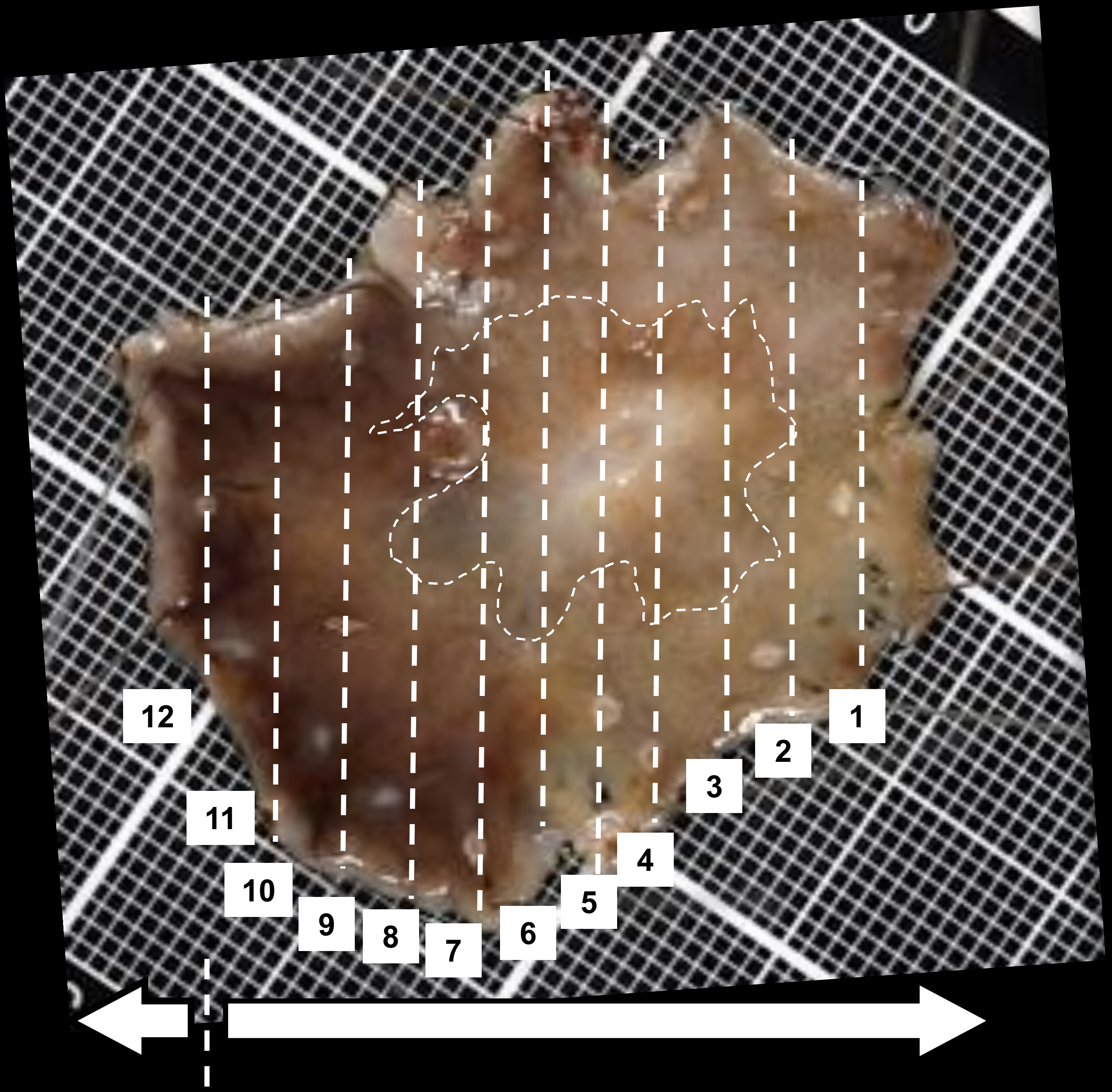
口側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肛門側

口側

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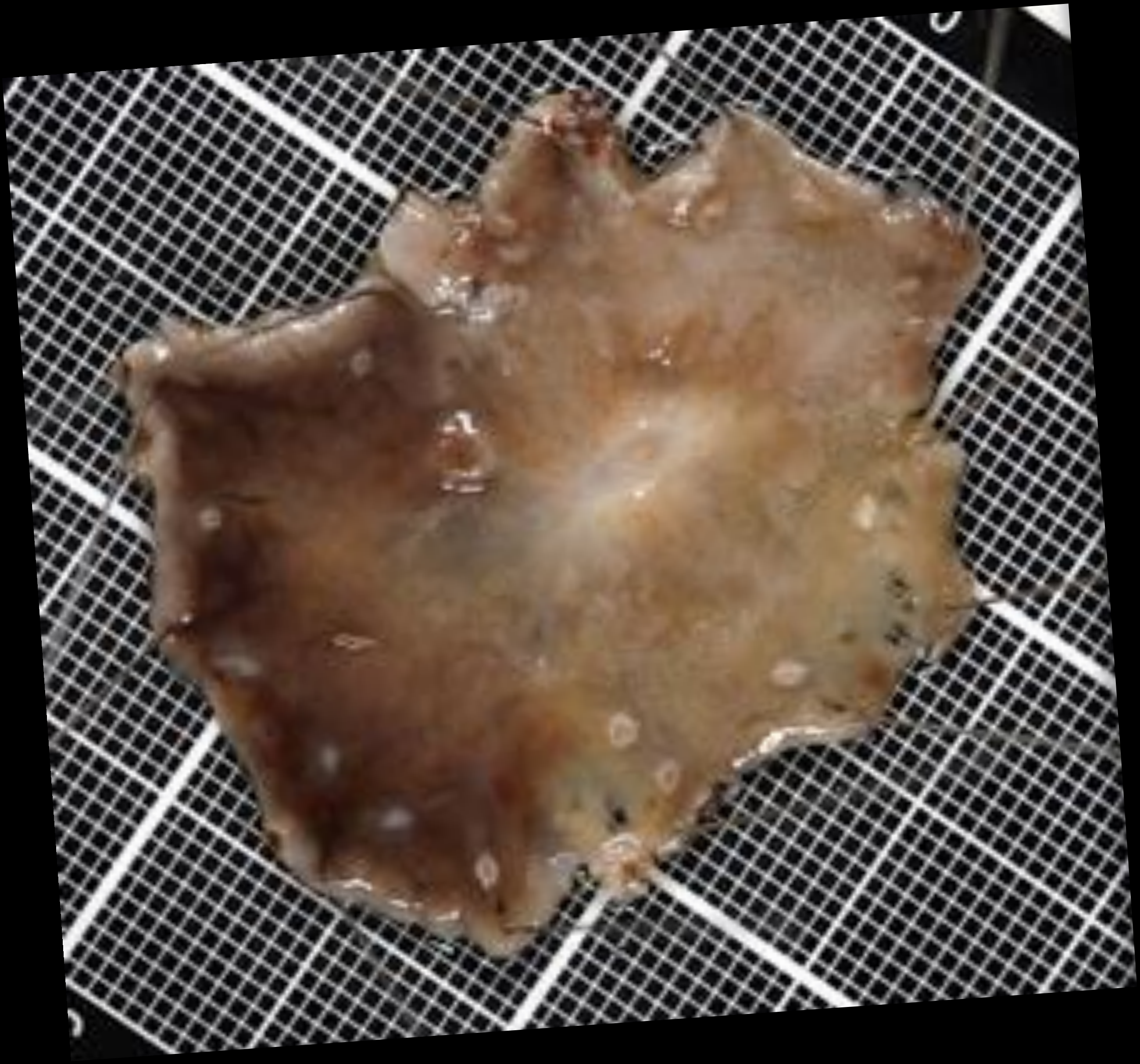

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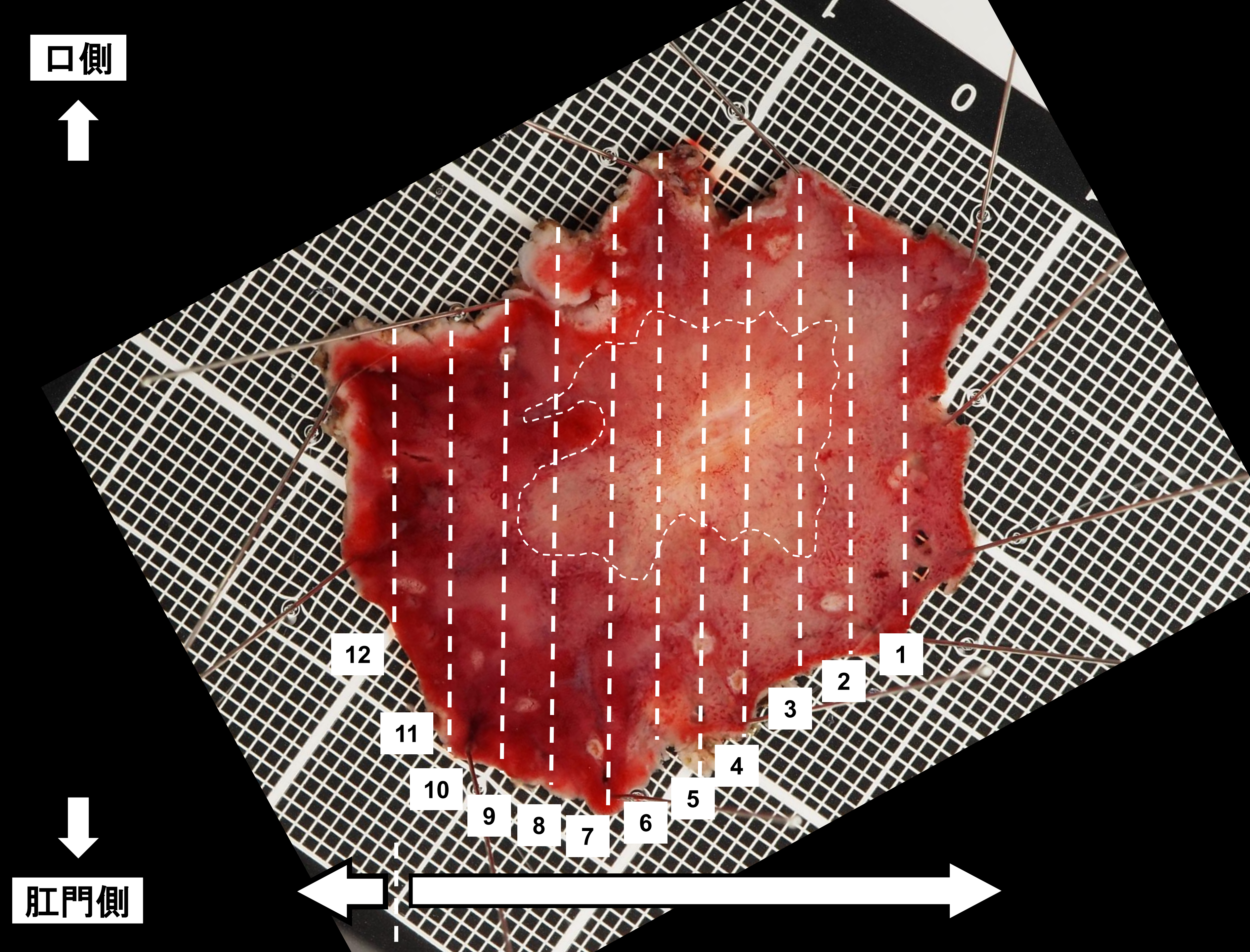
肛門側

key slice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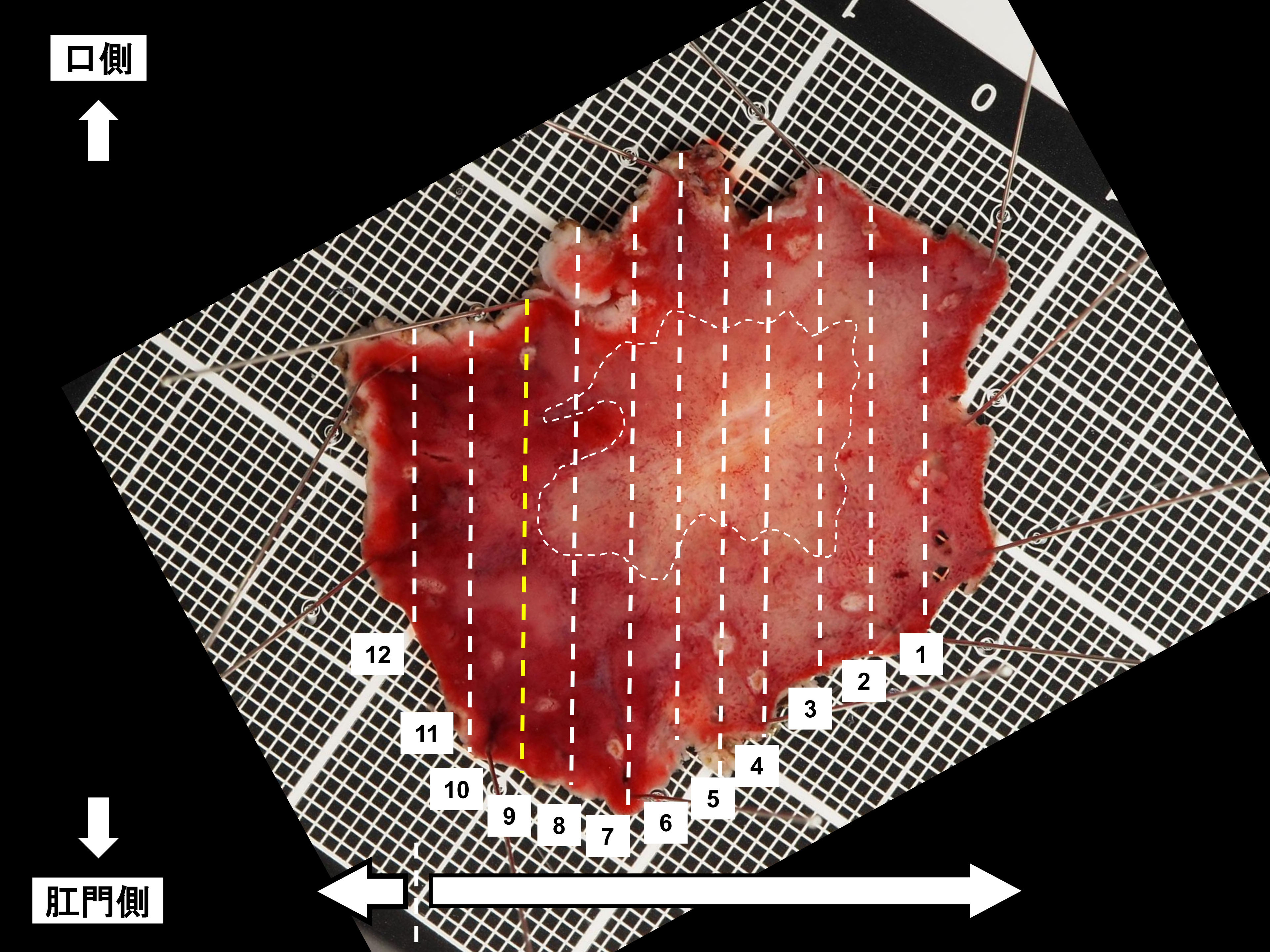
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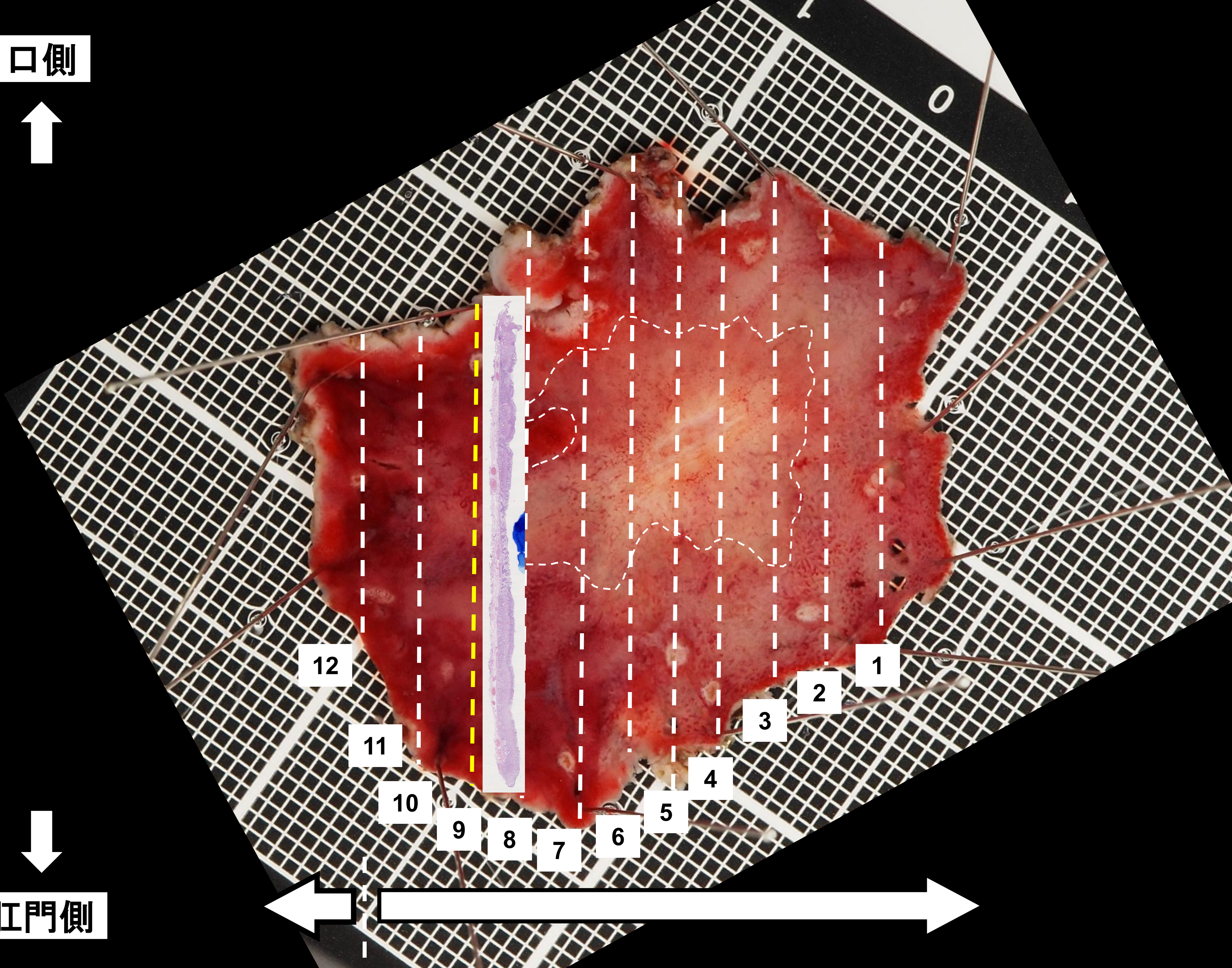
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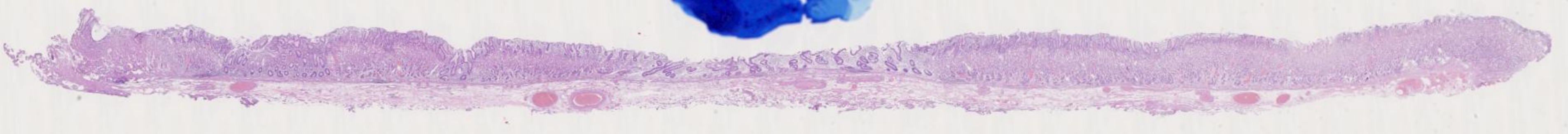
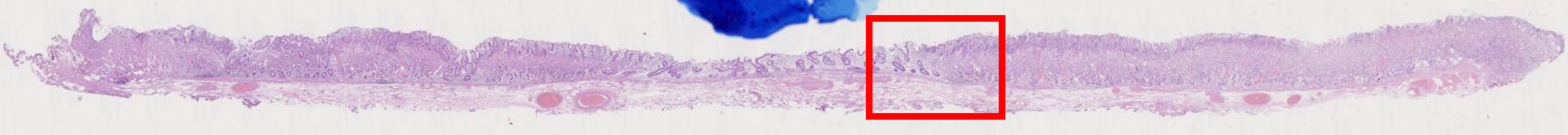
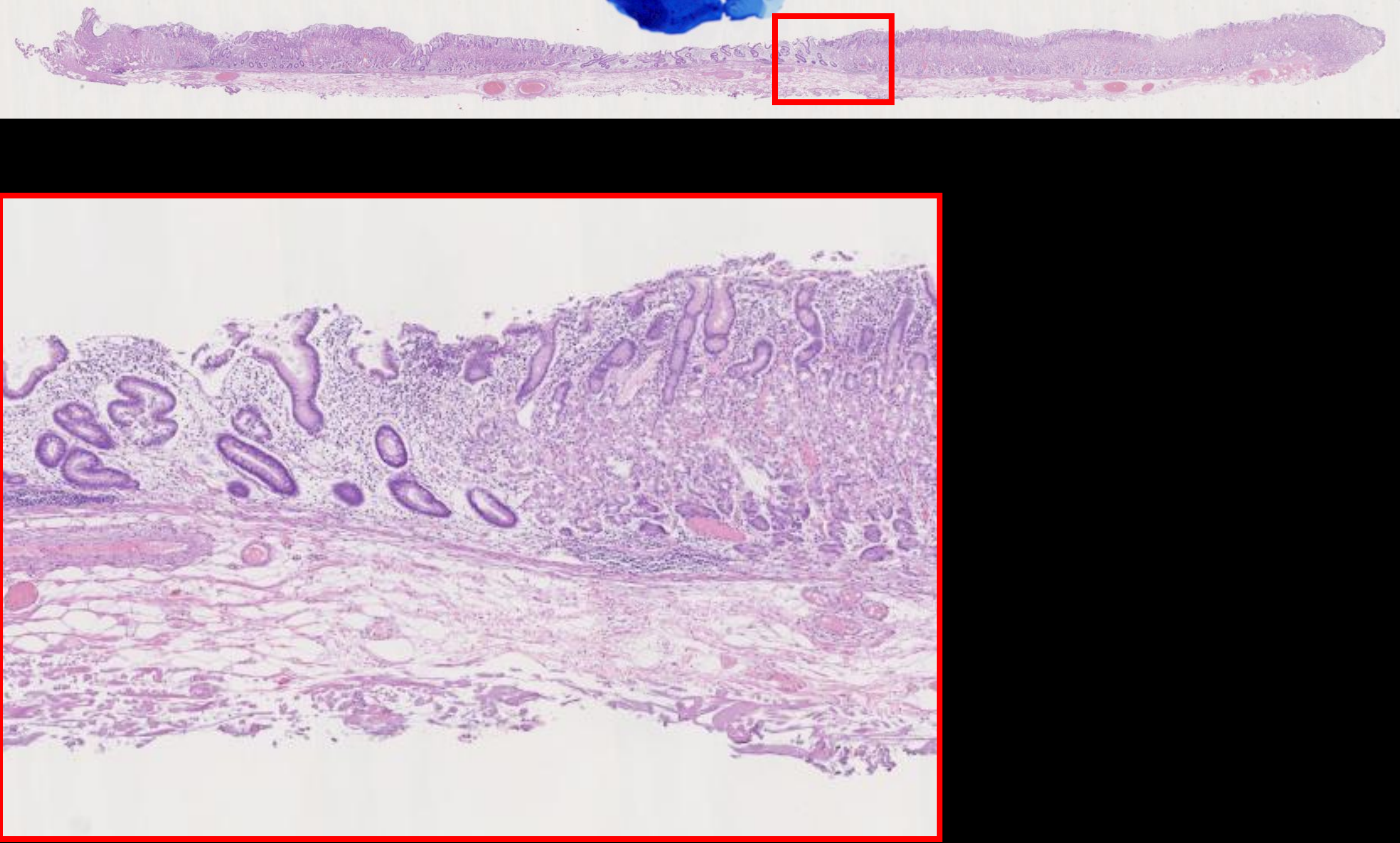
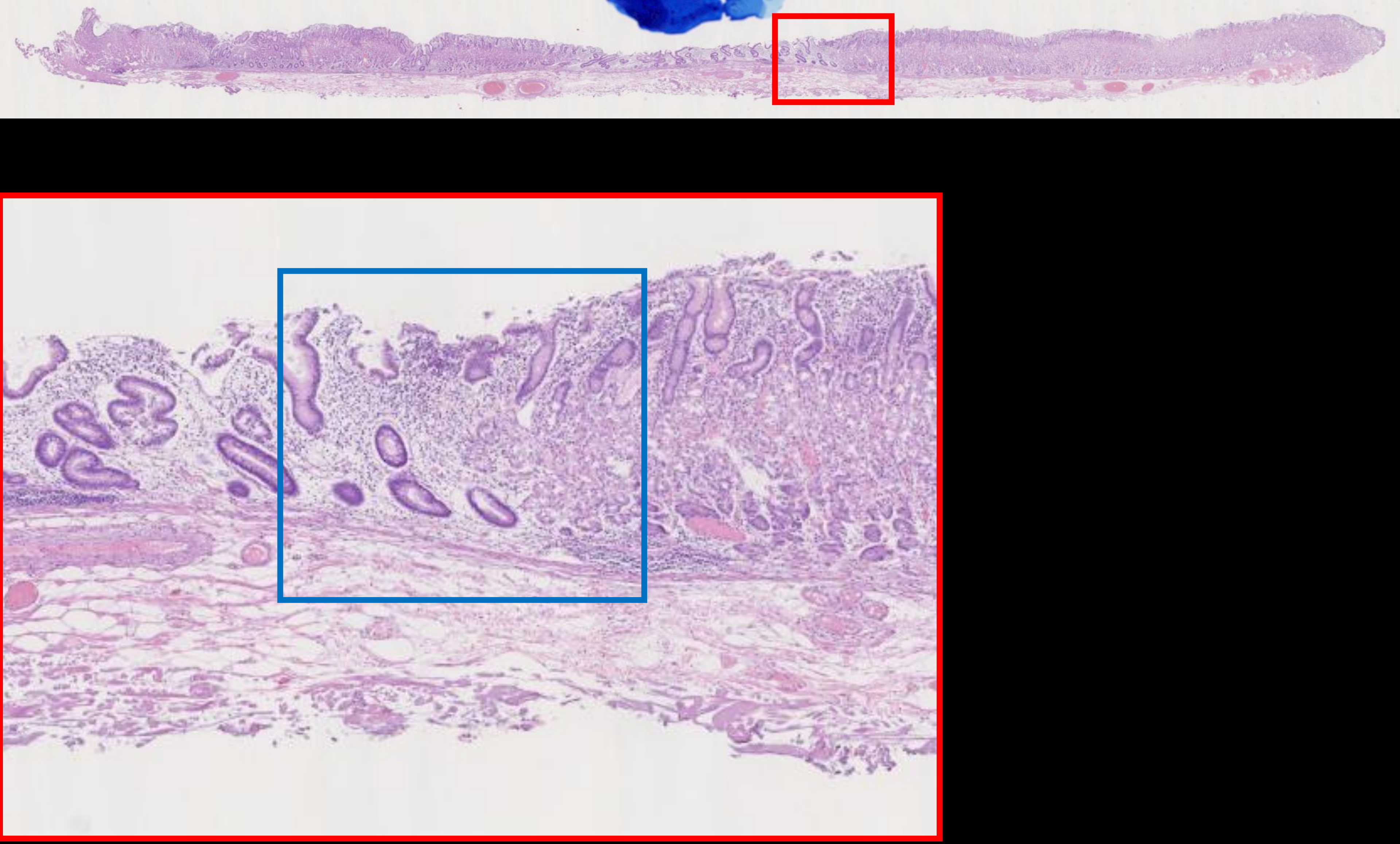
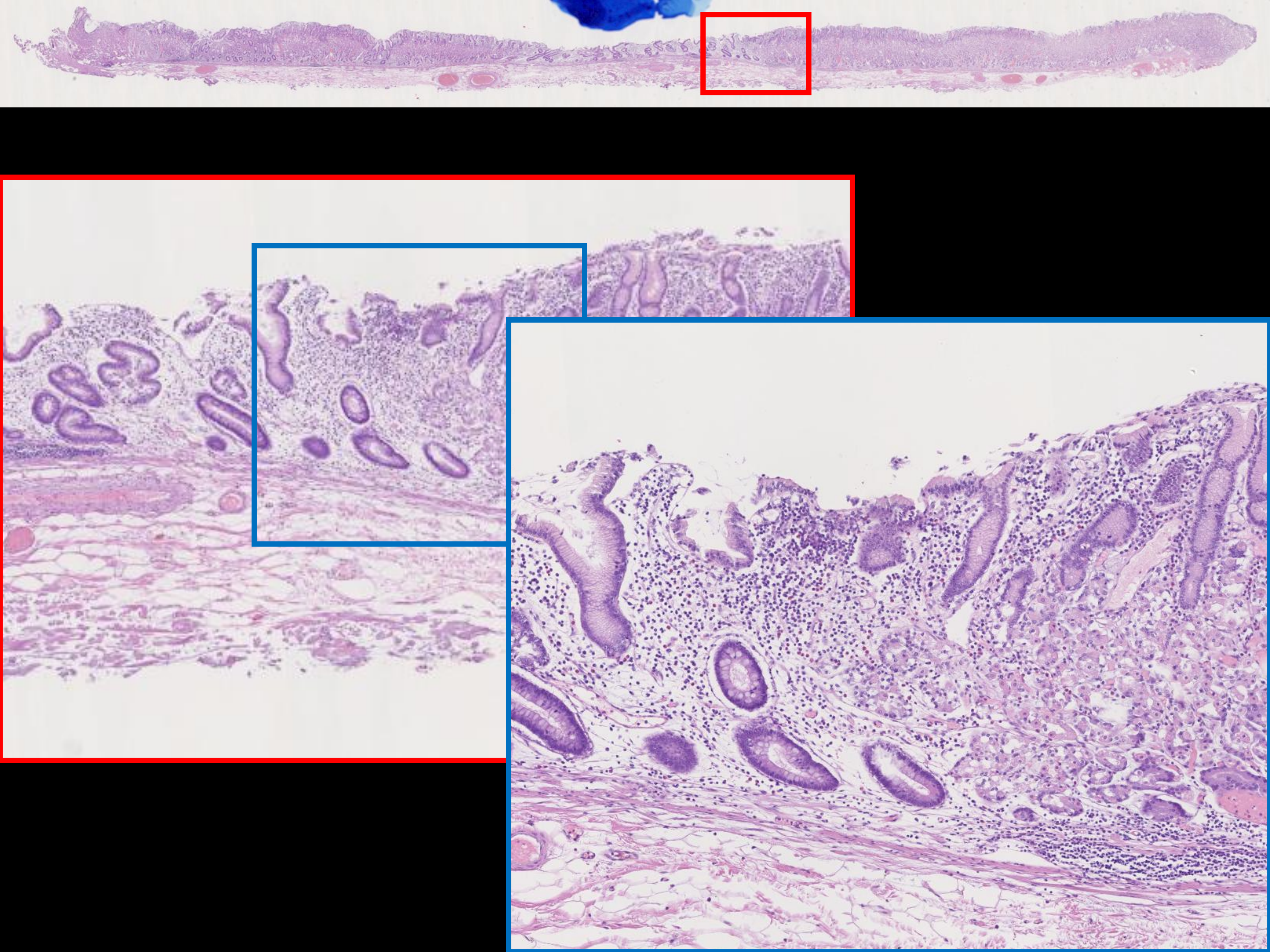
肛門側

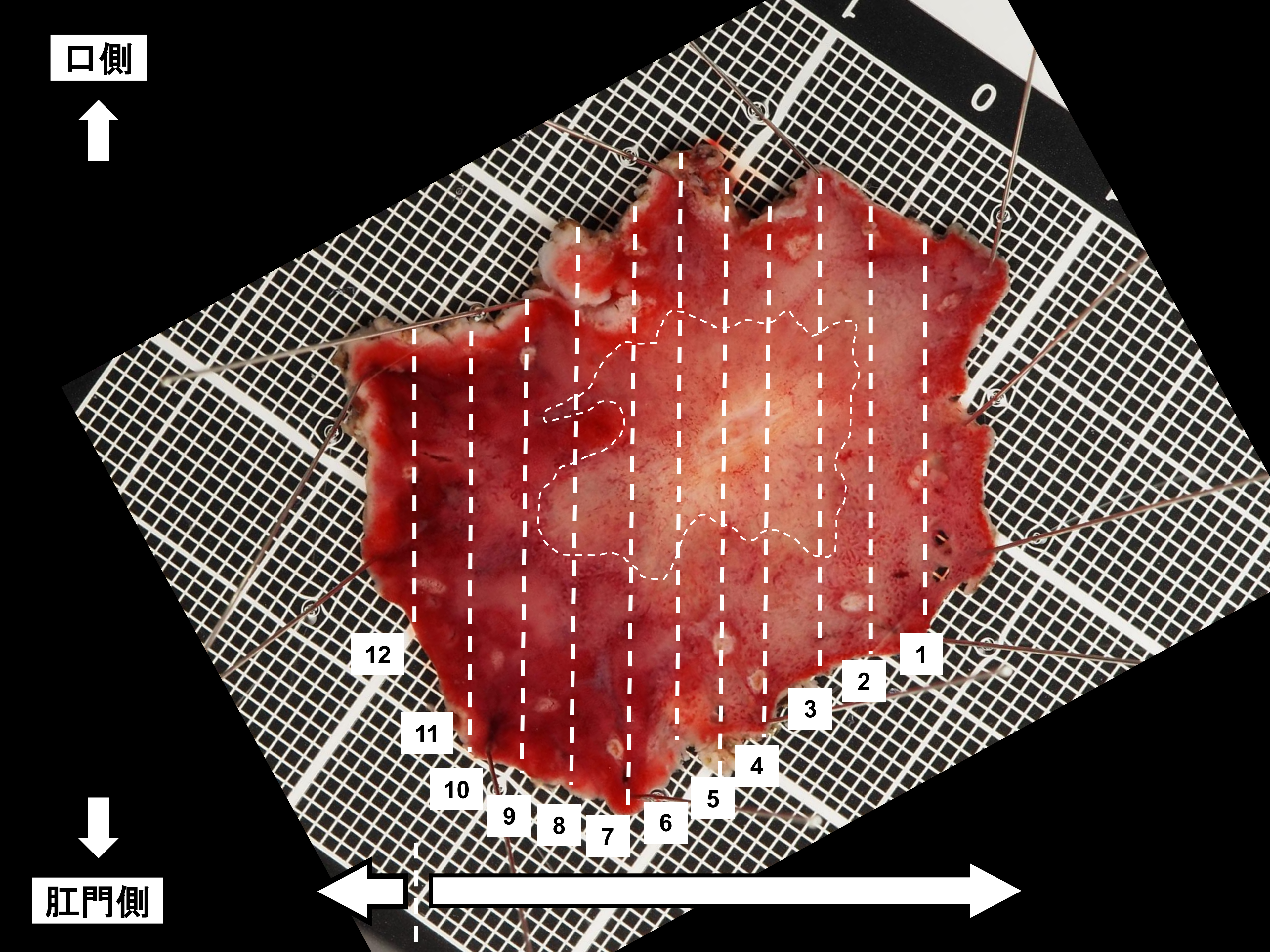








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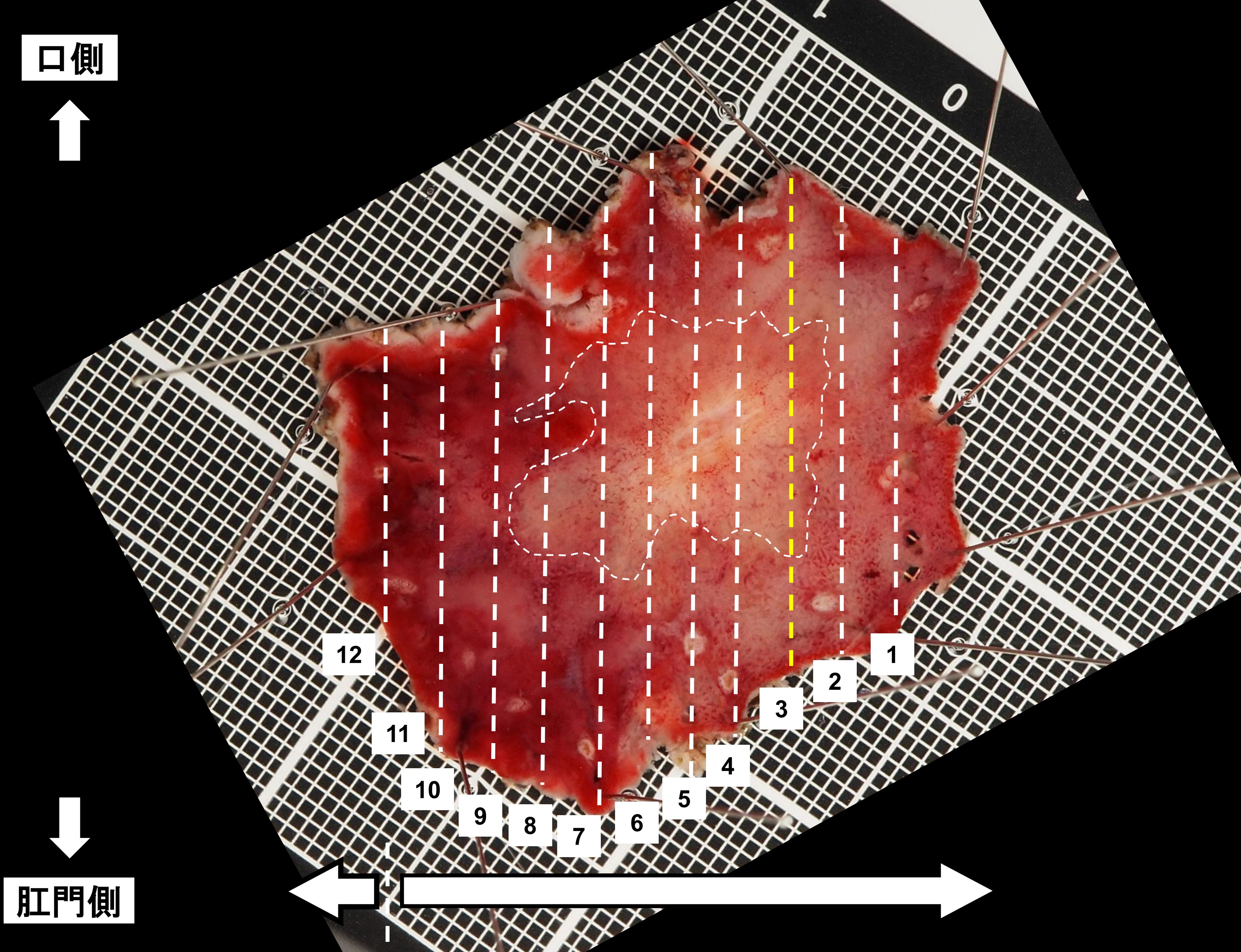
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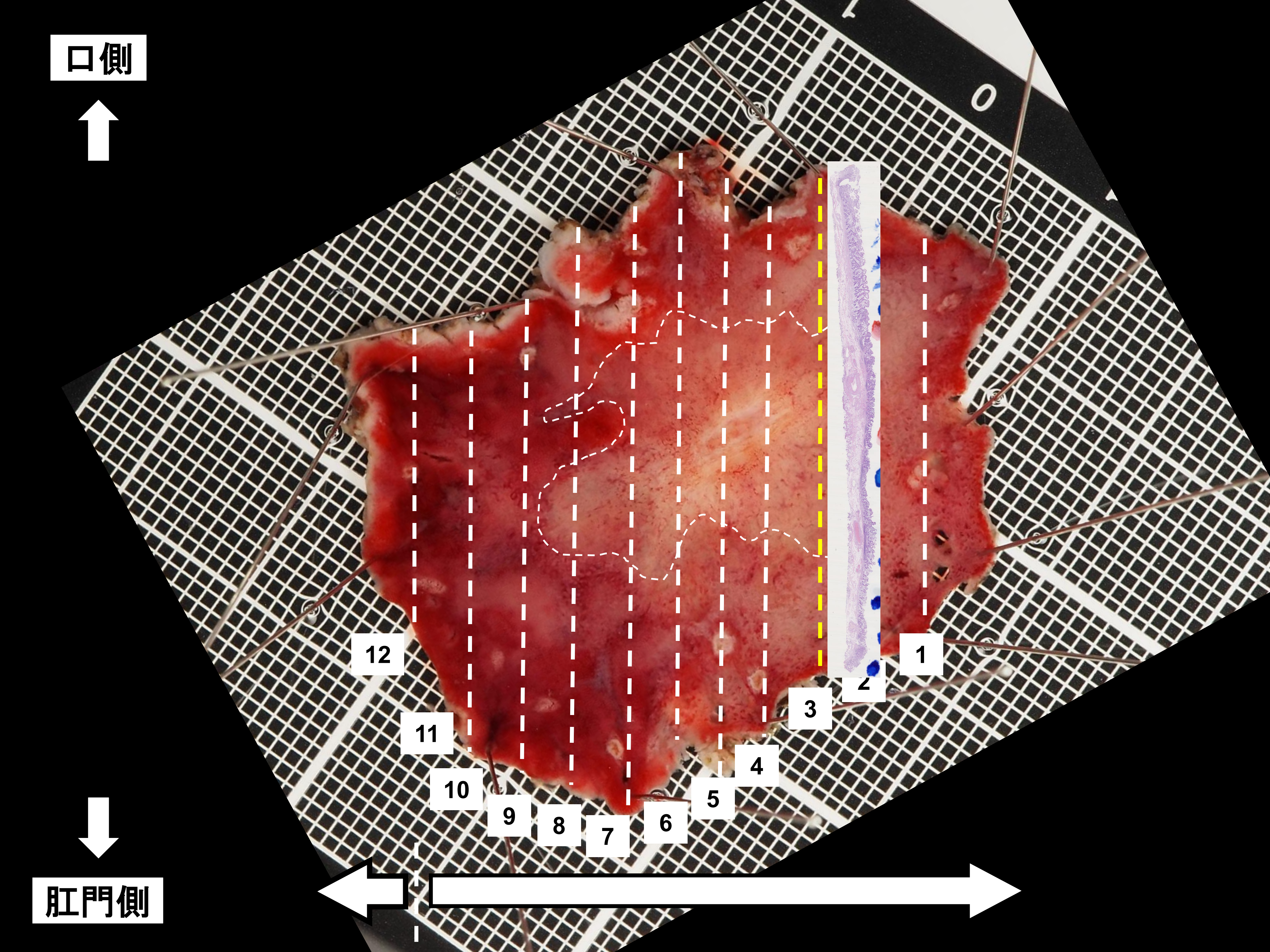
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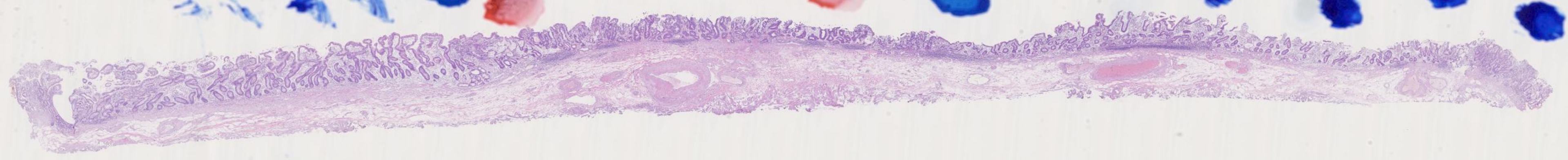

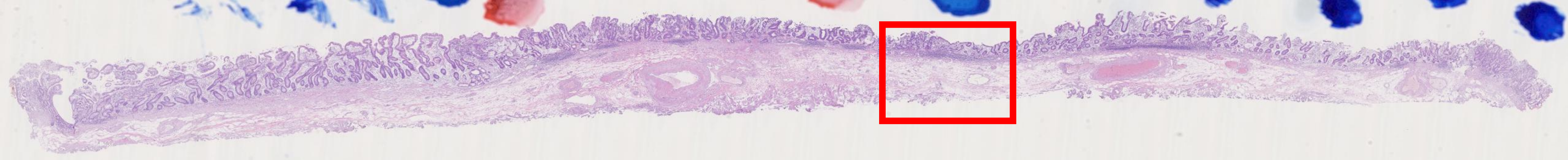

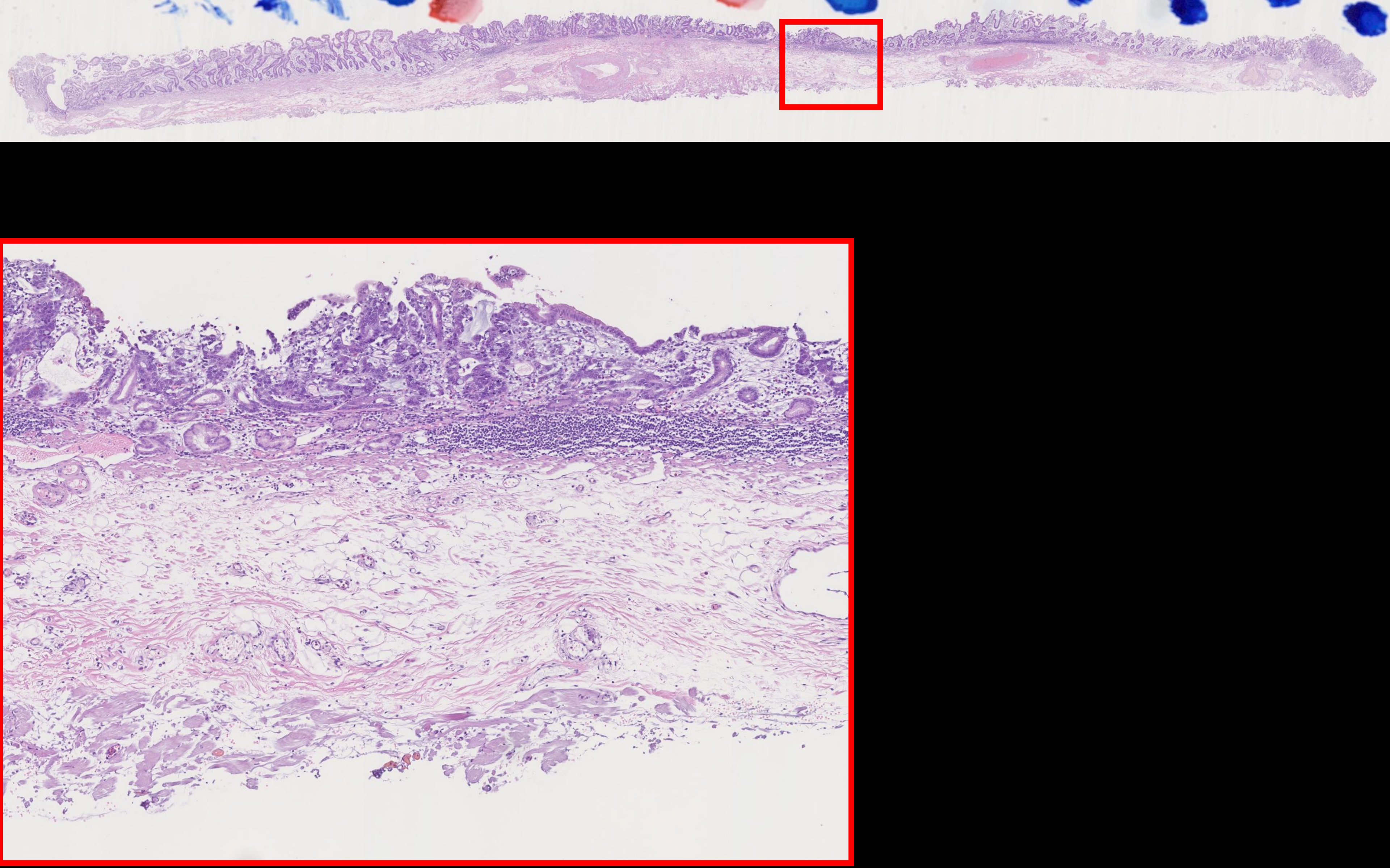

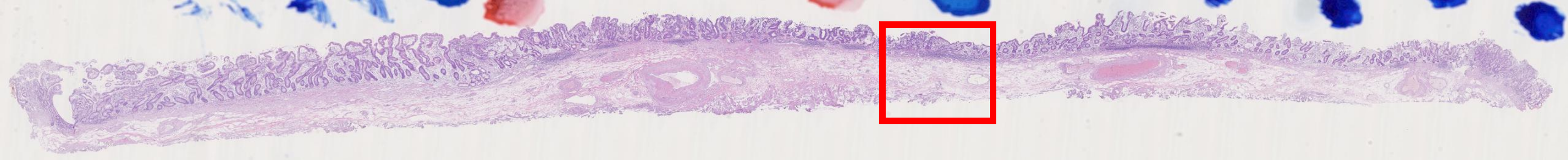

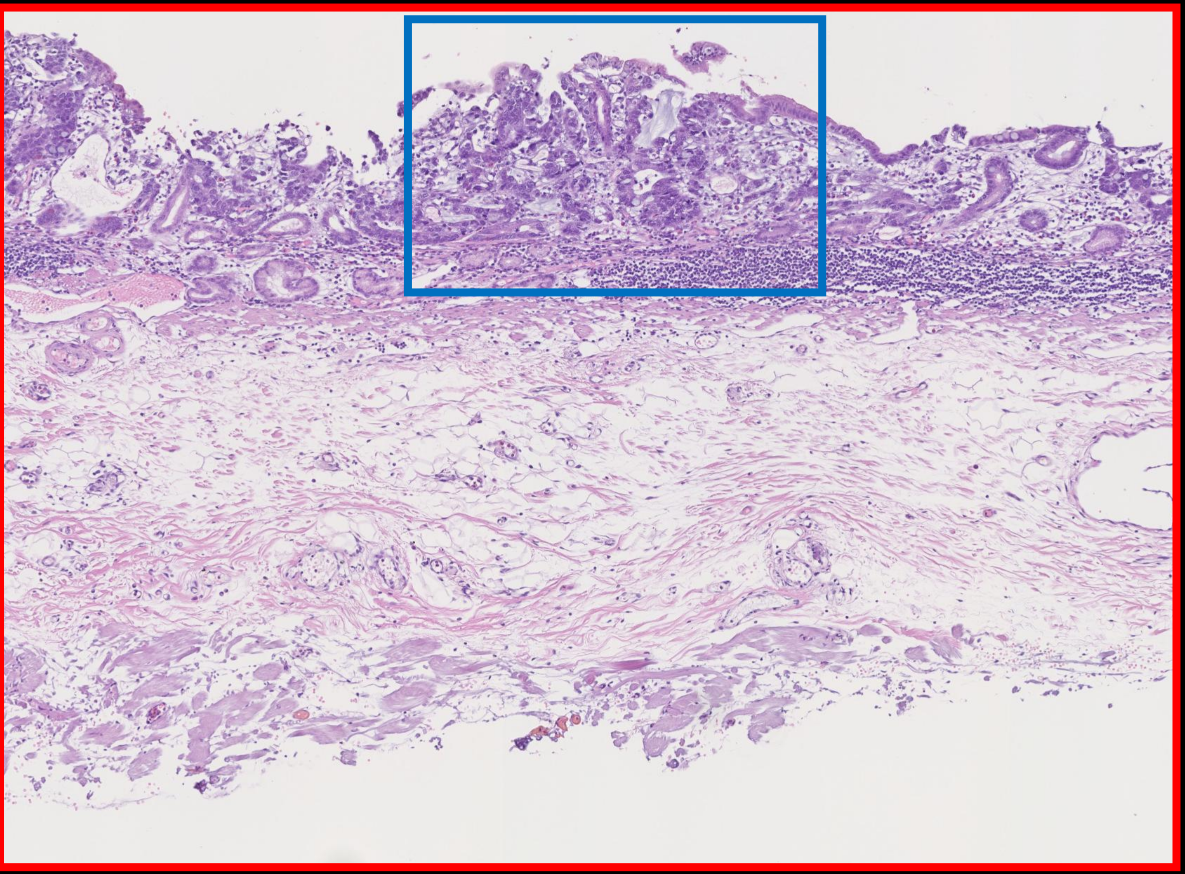

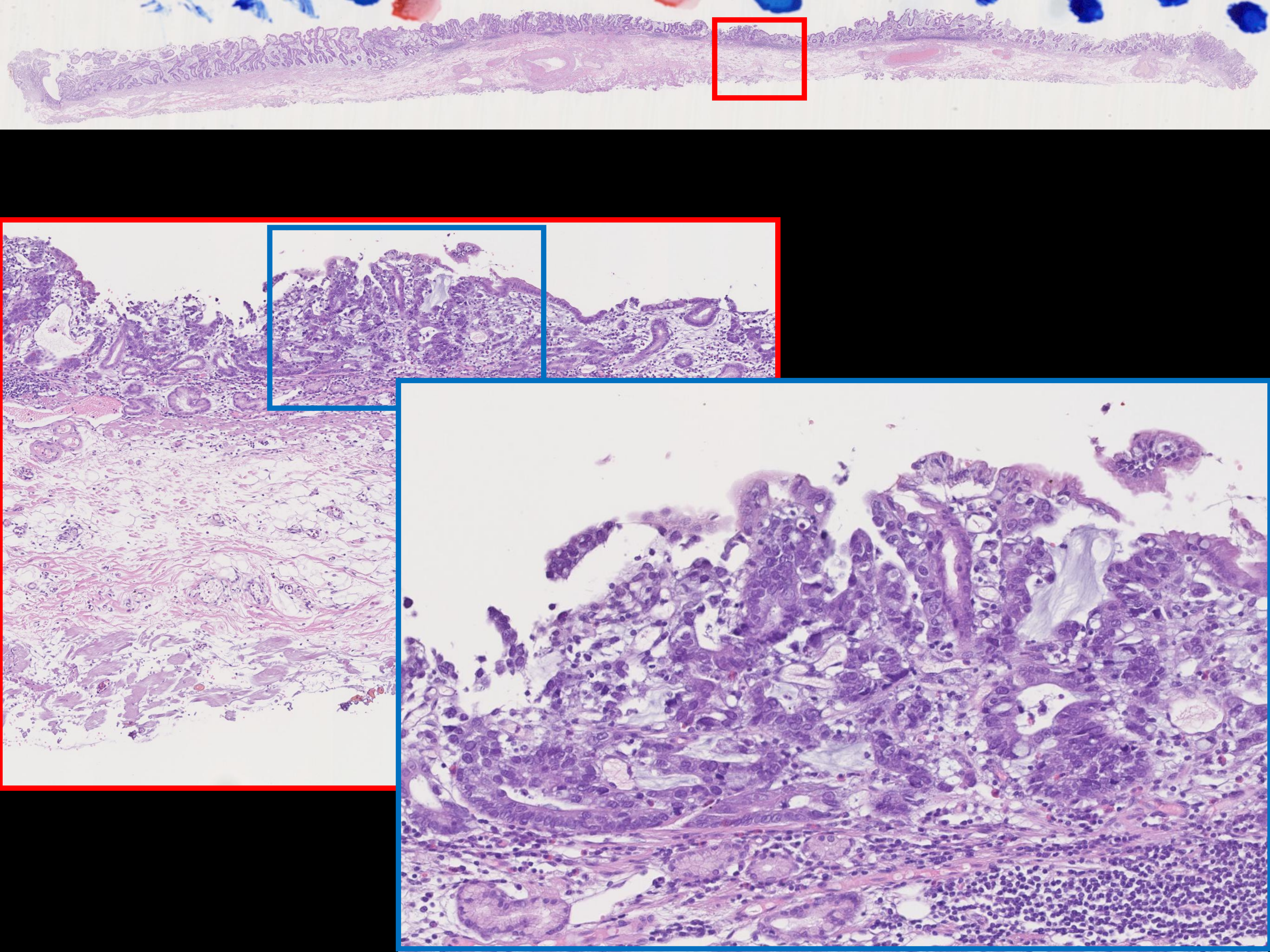

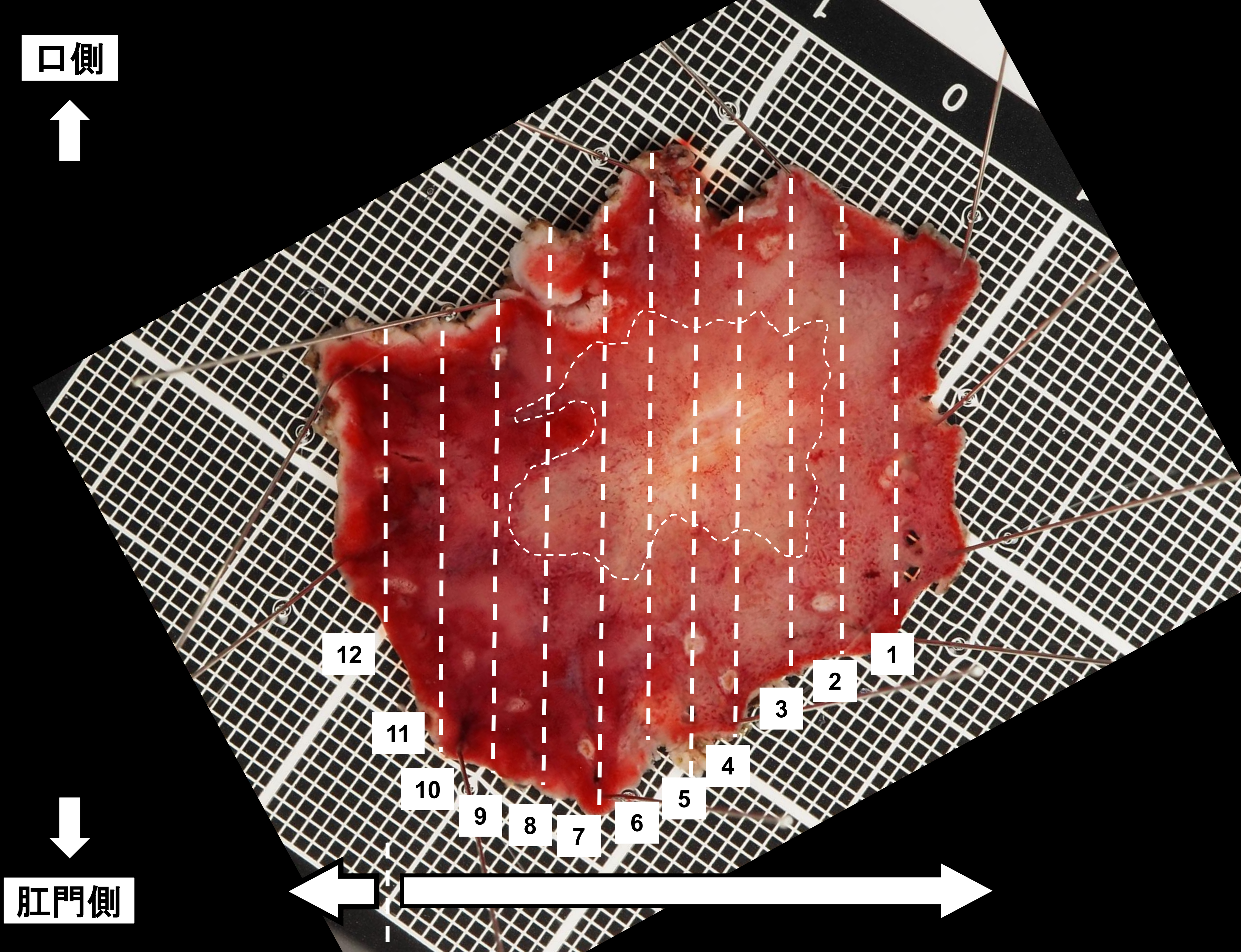
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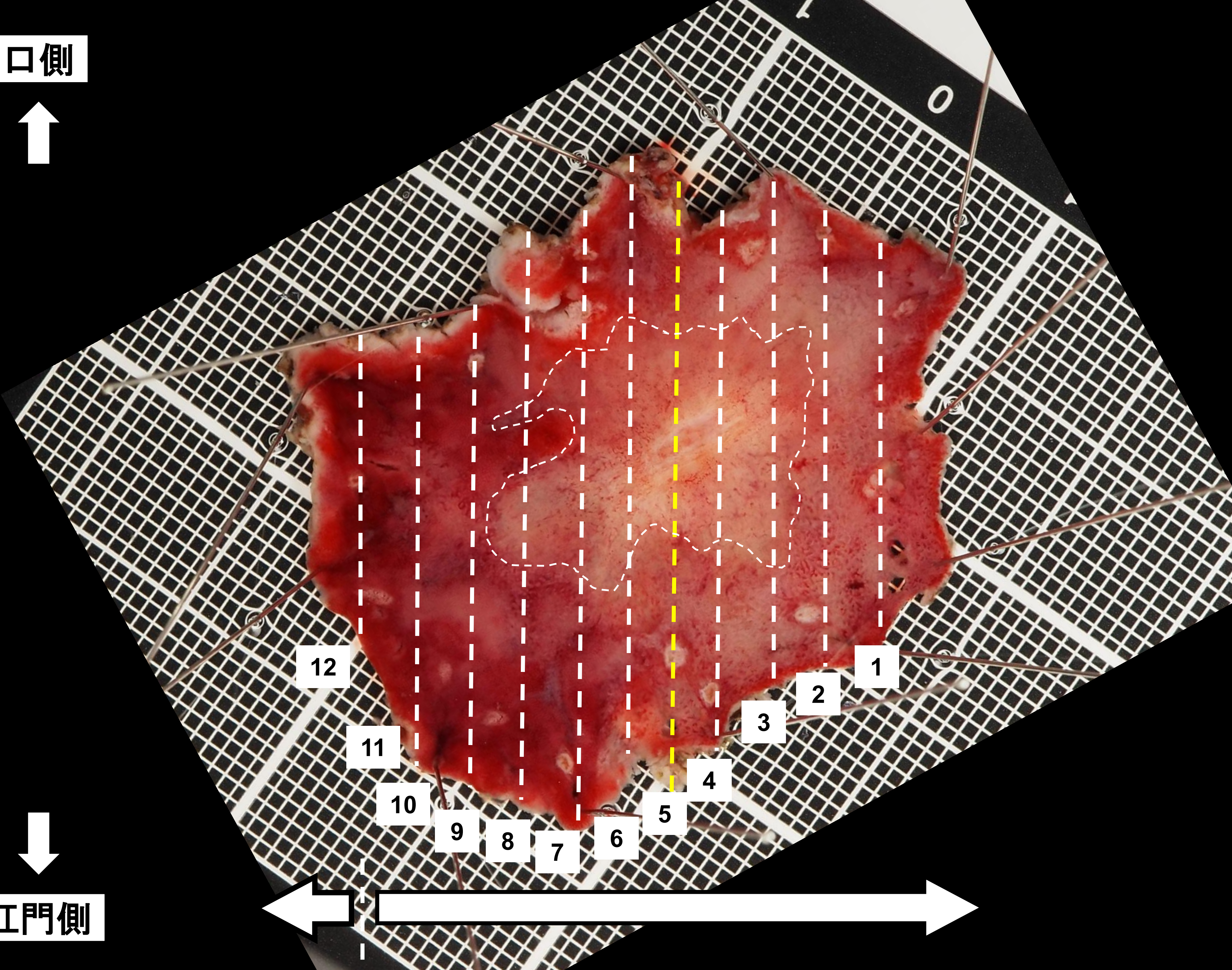
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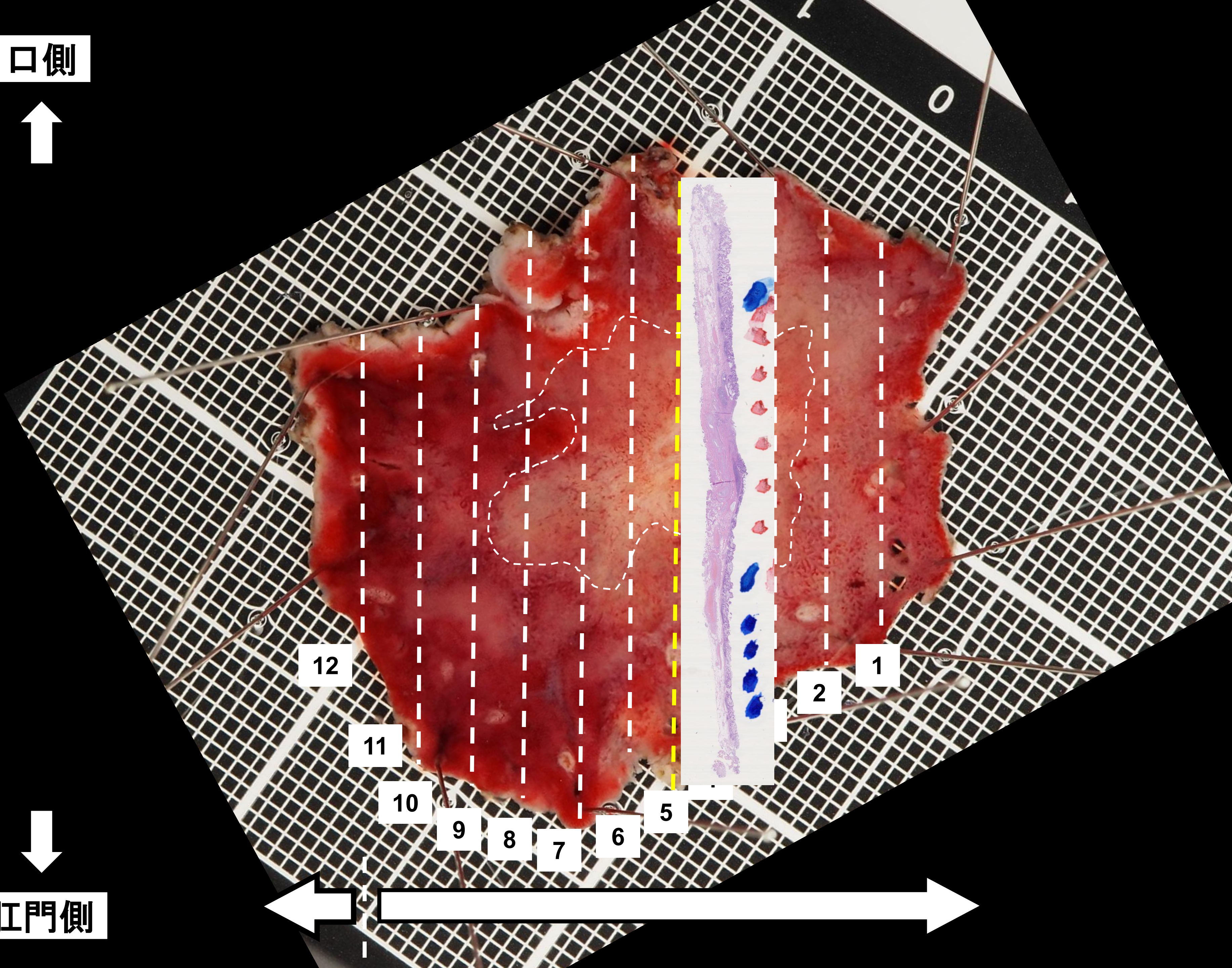
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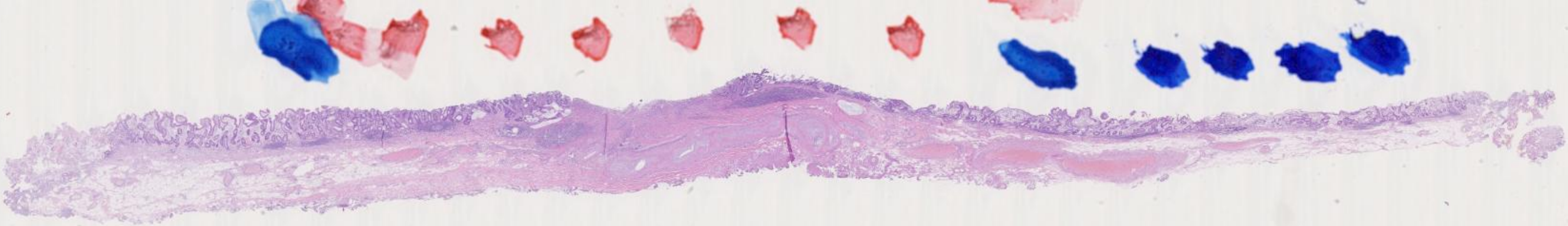

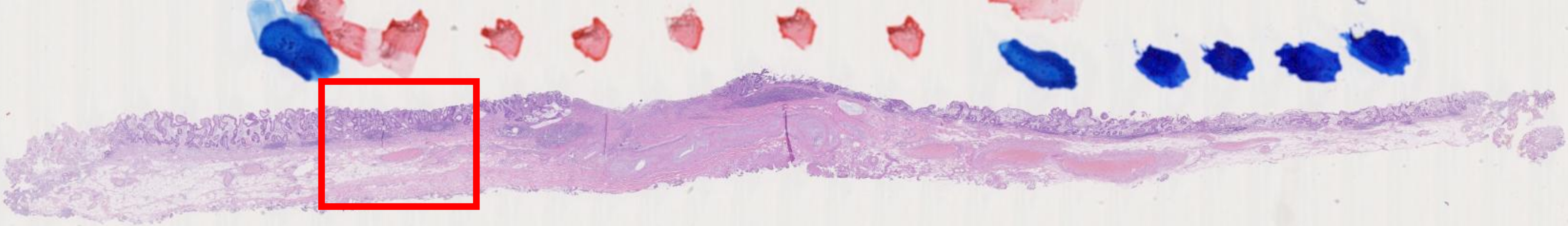

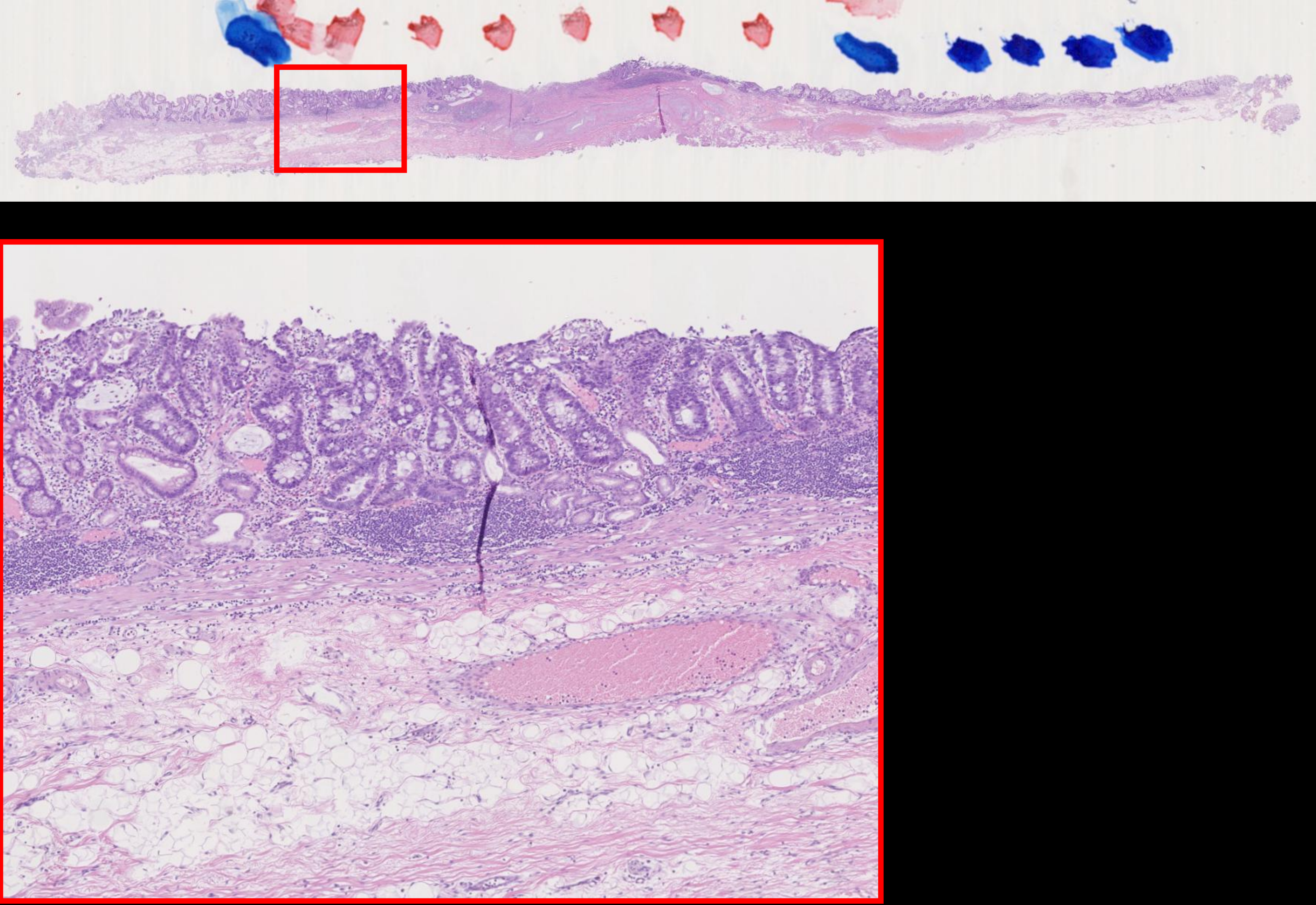

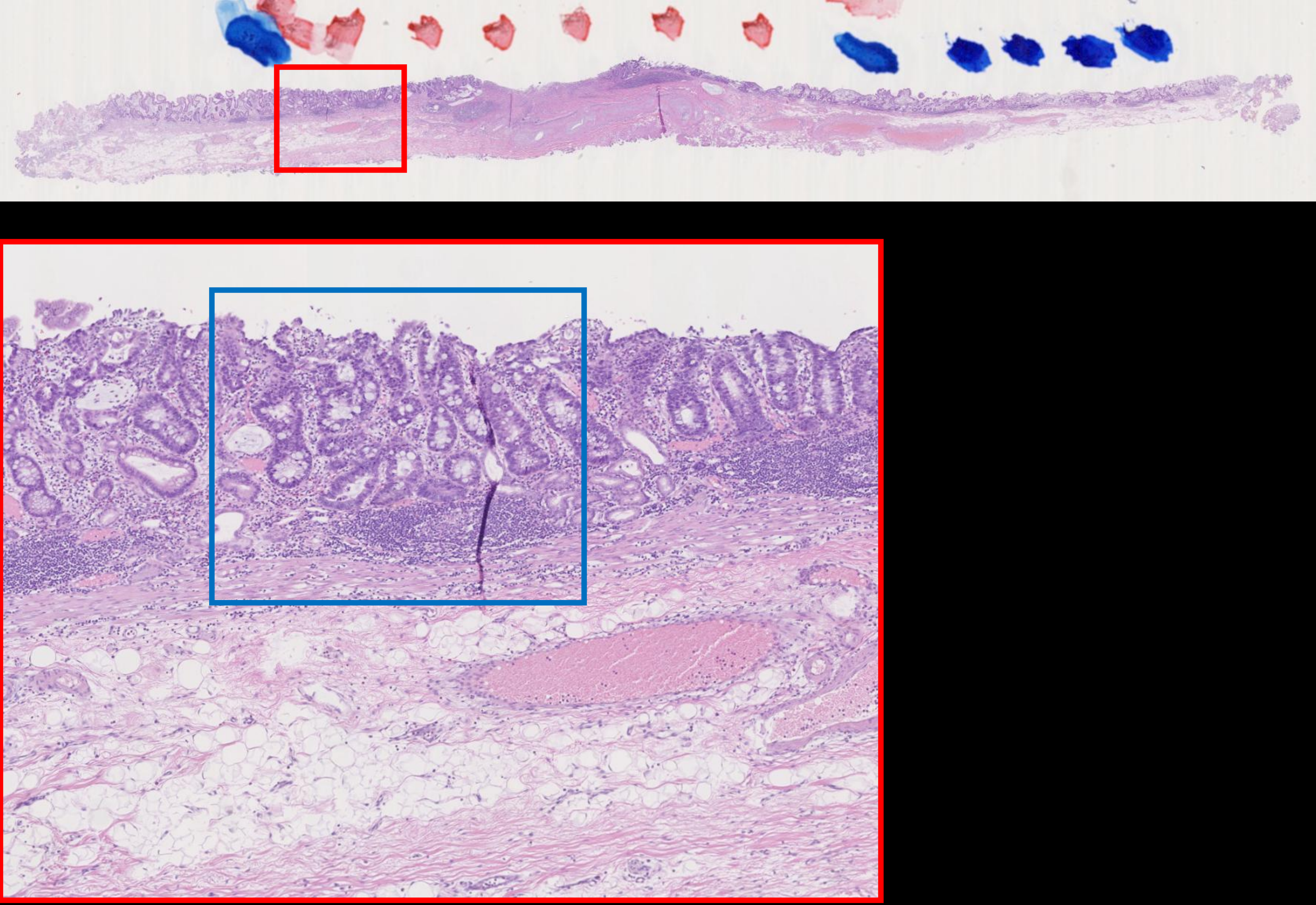

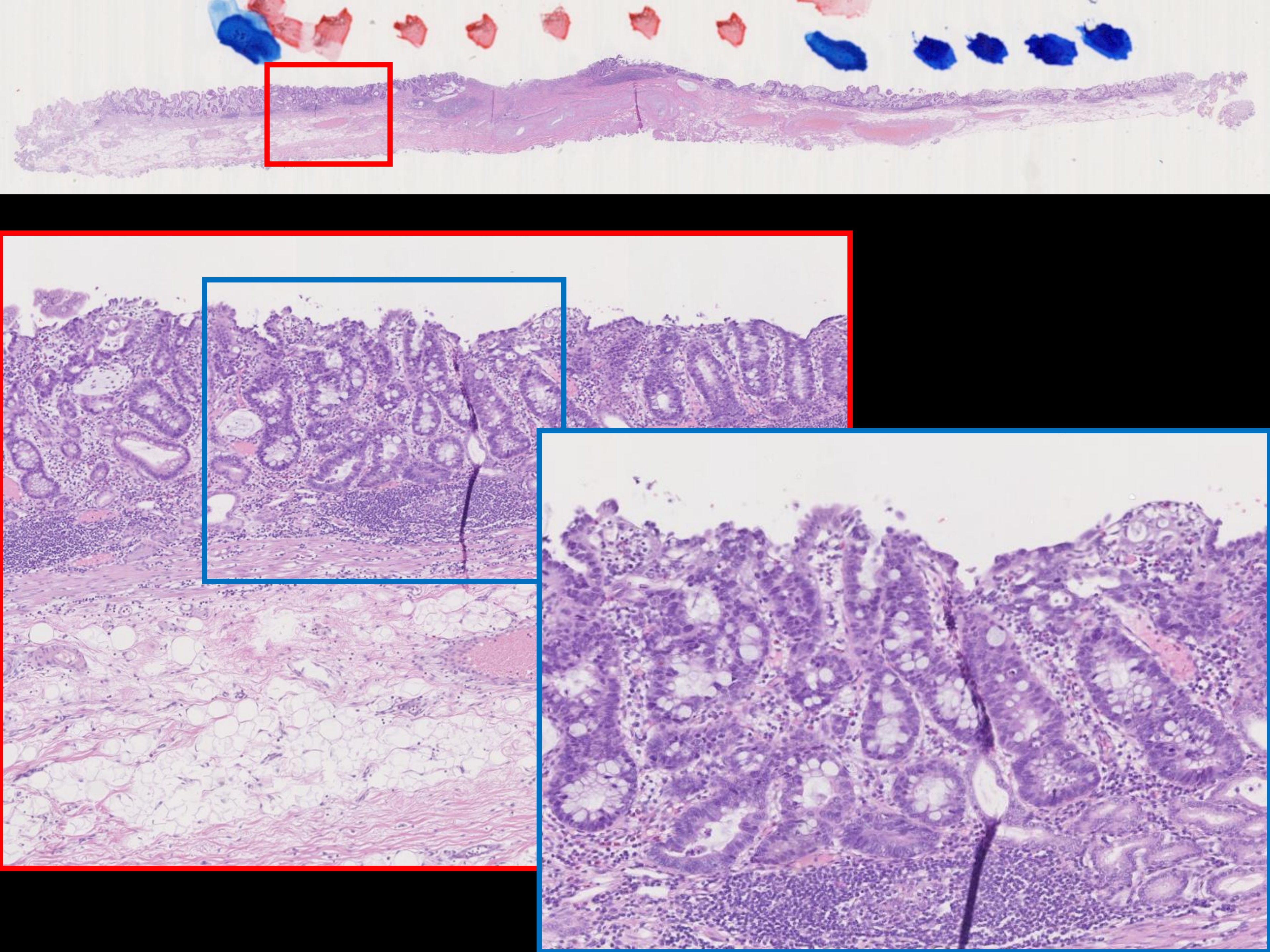

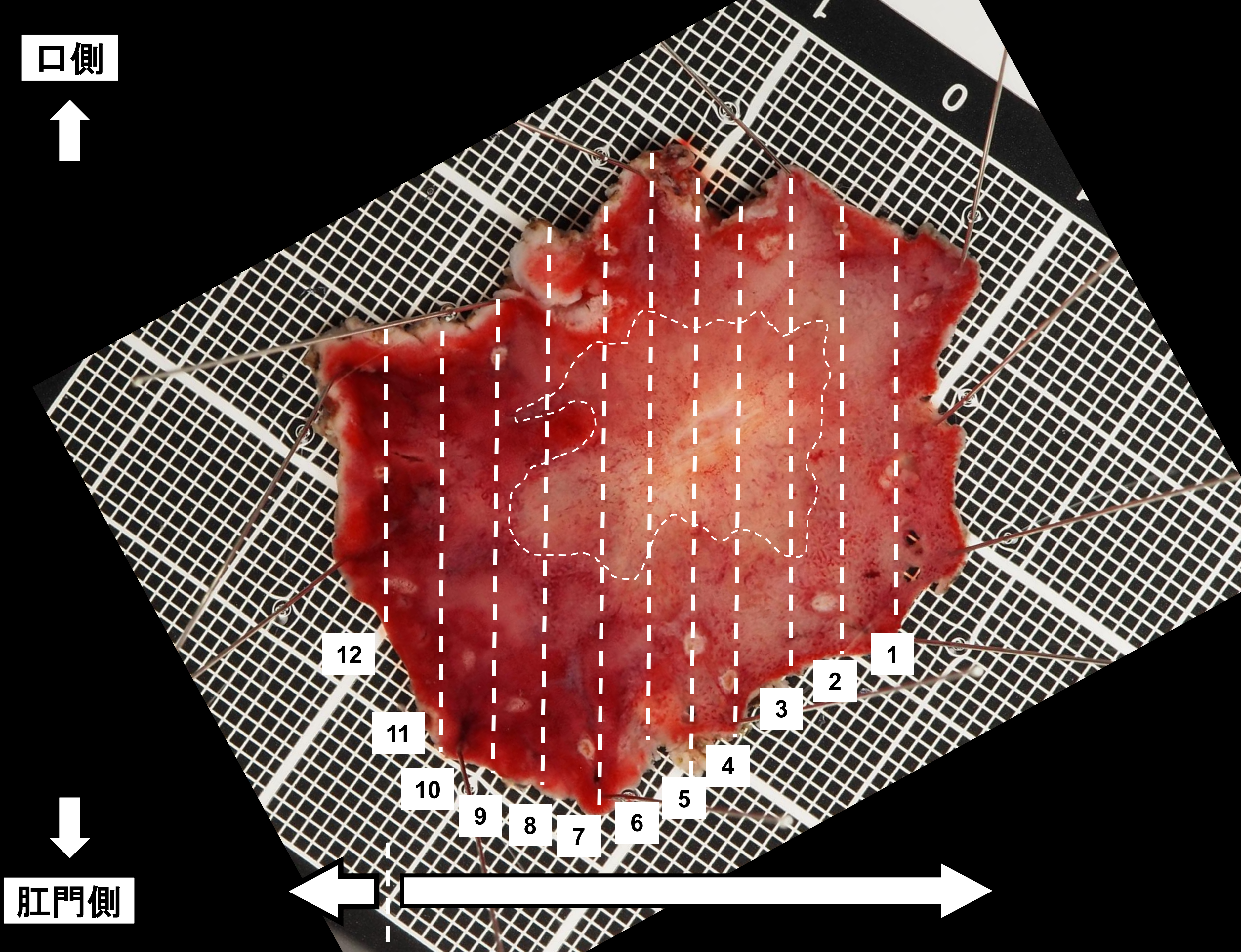
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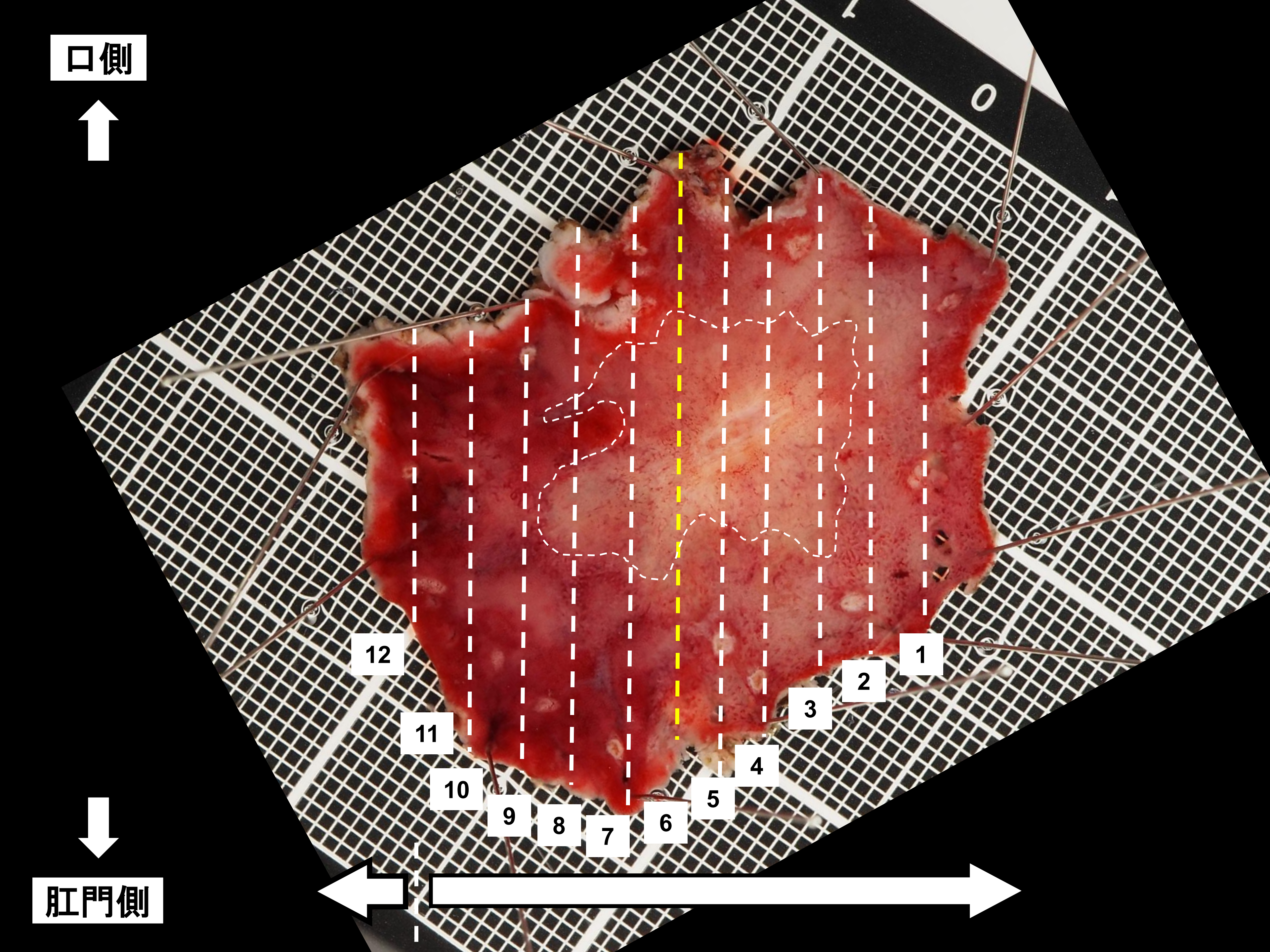
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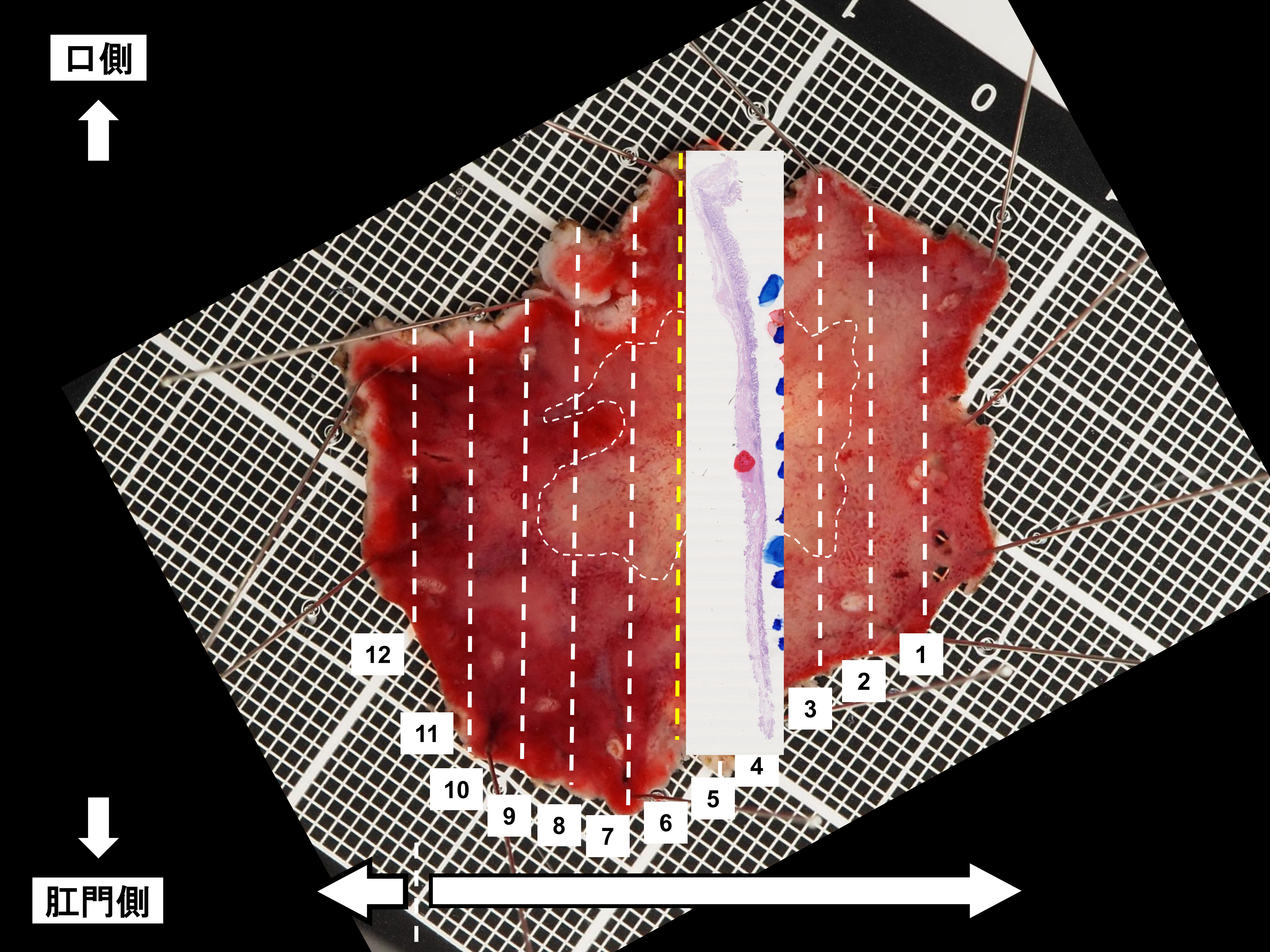
肛門側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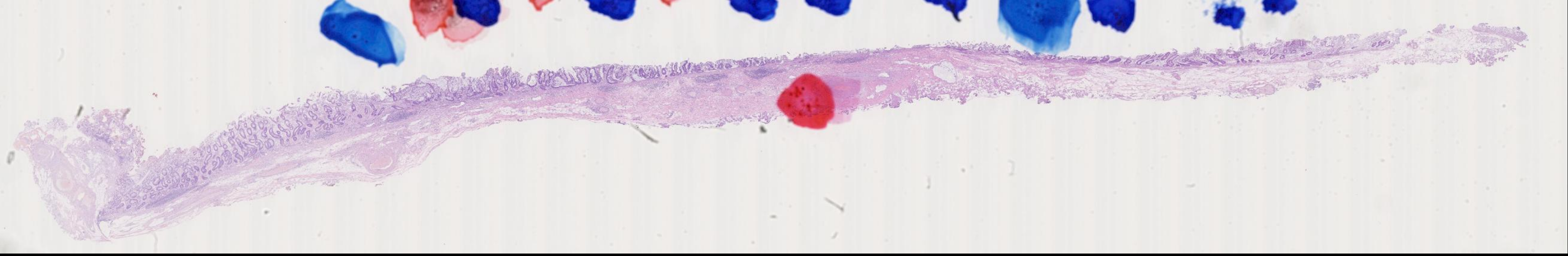

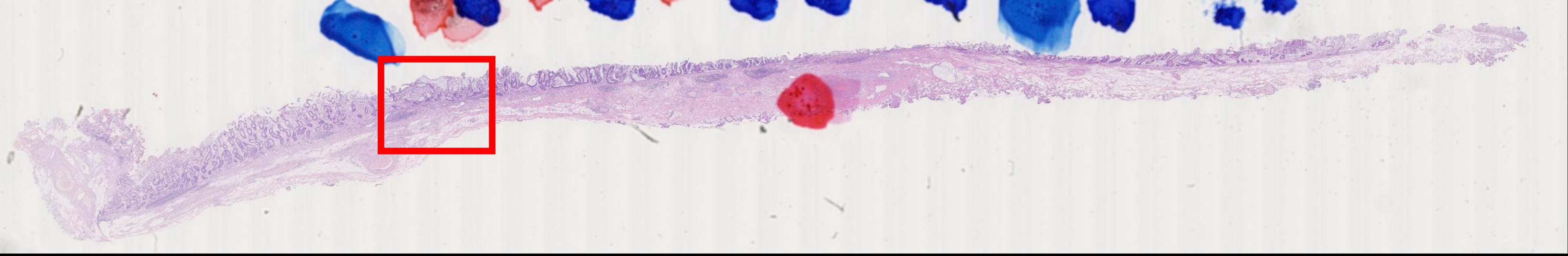

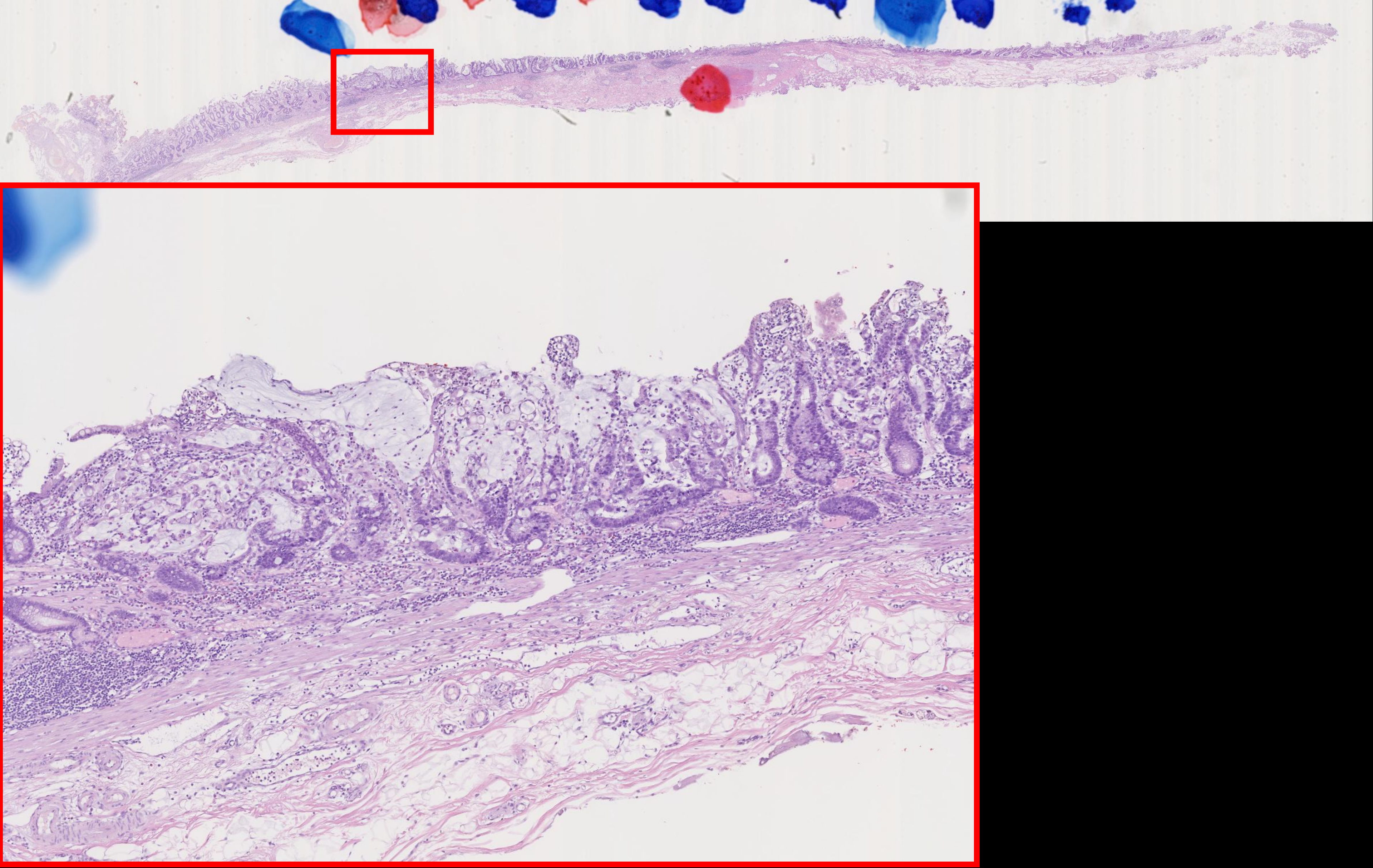

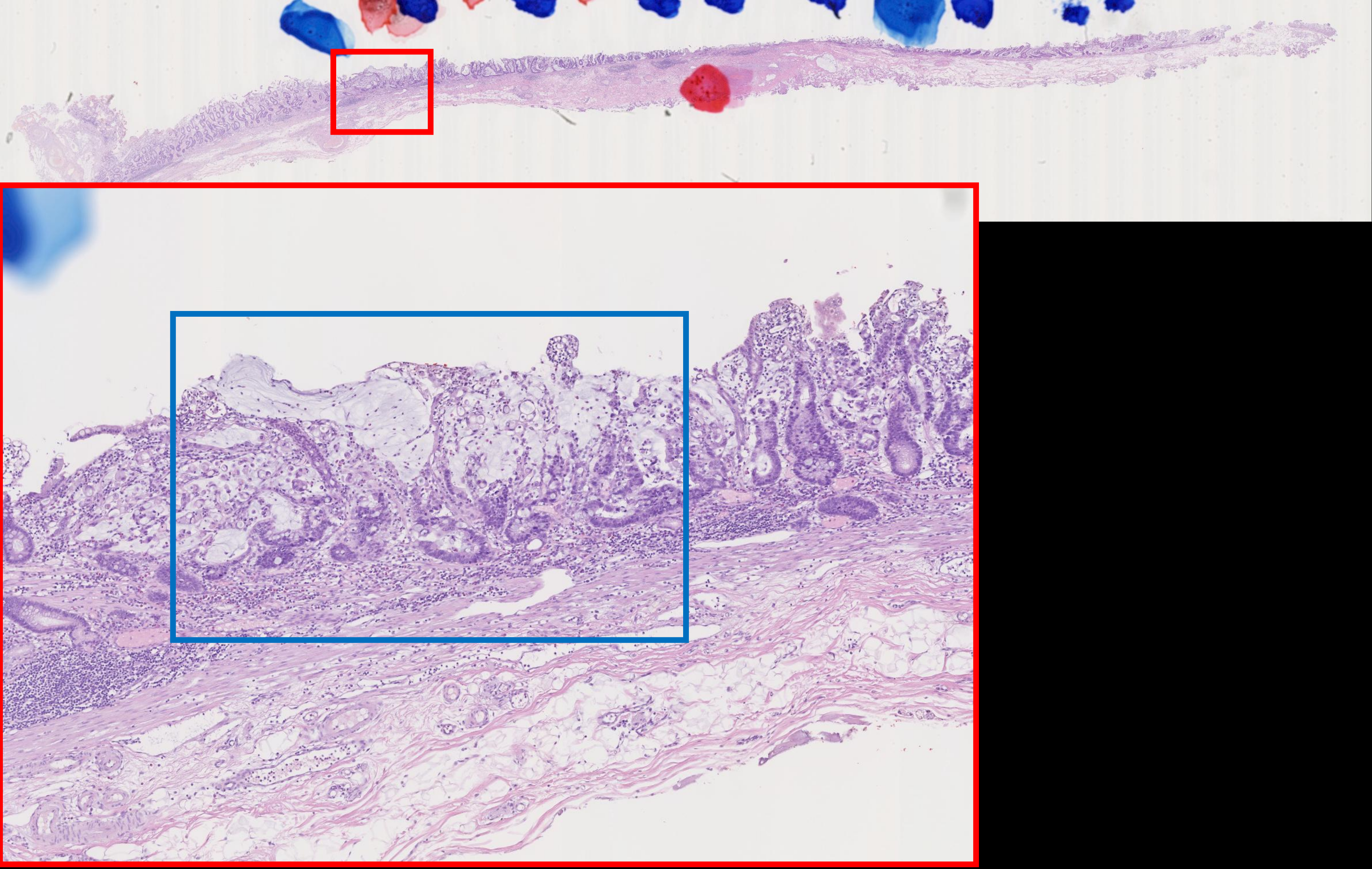

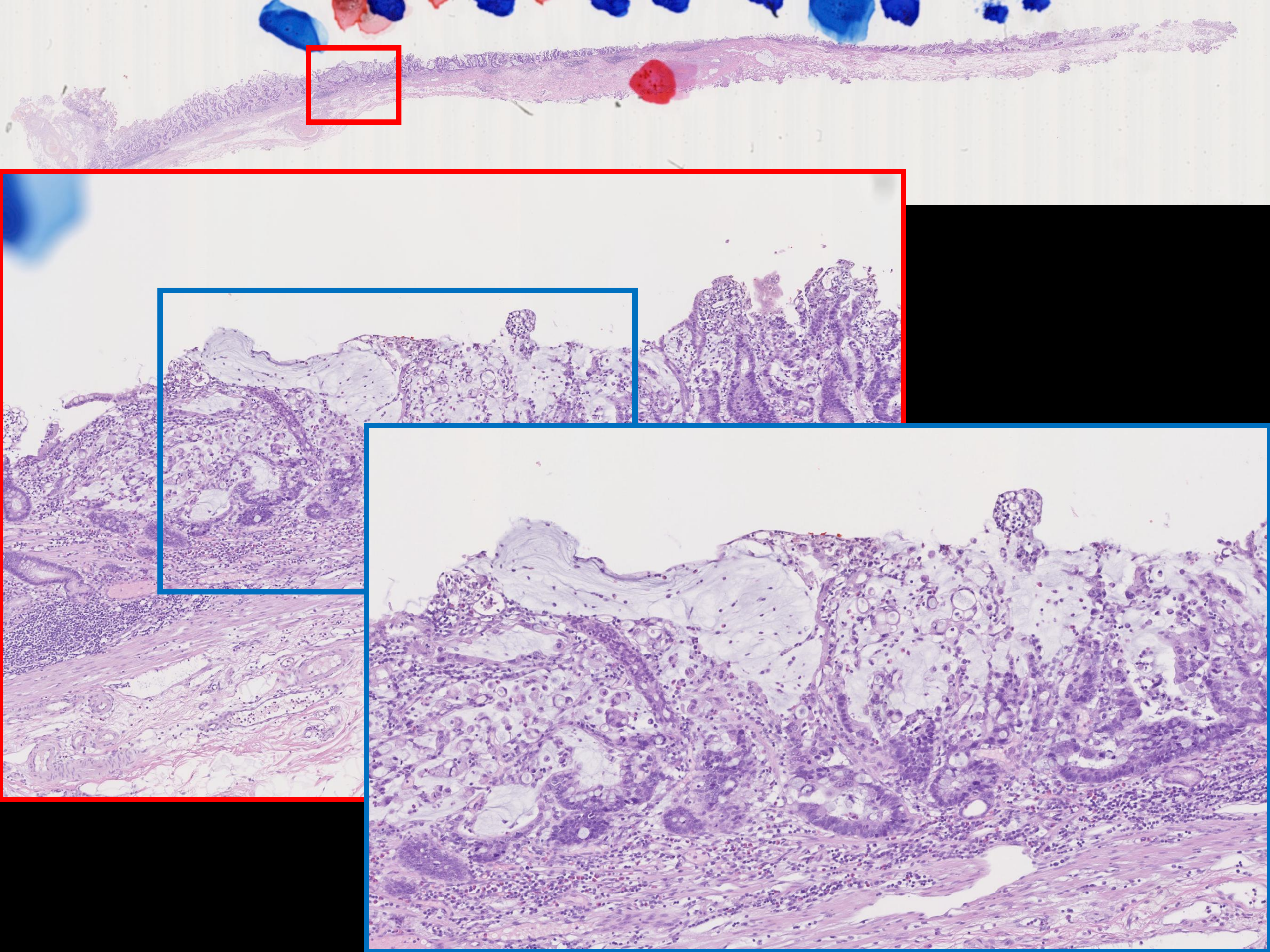

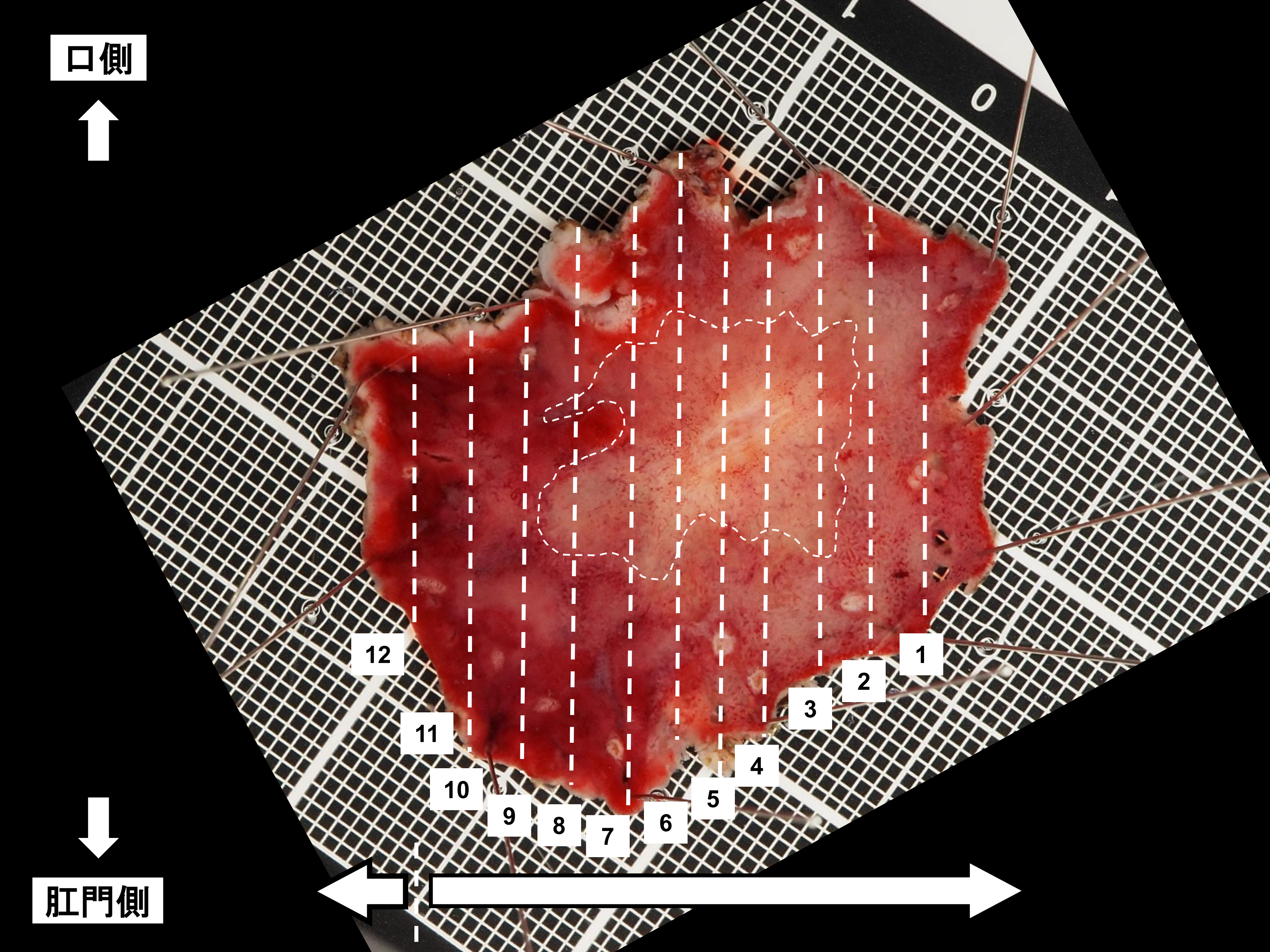
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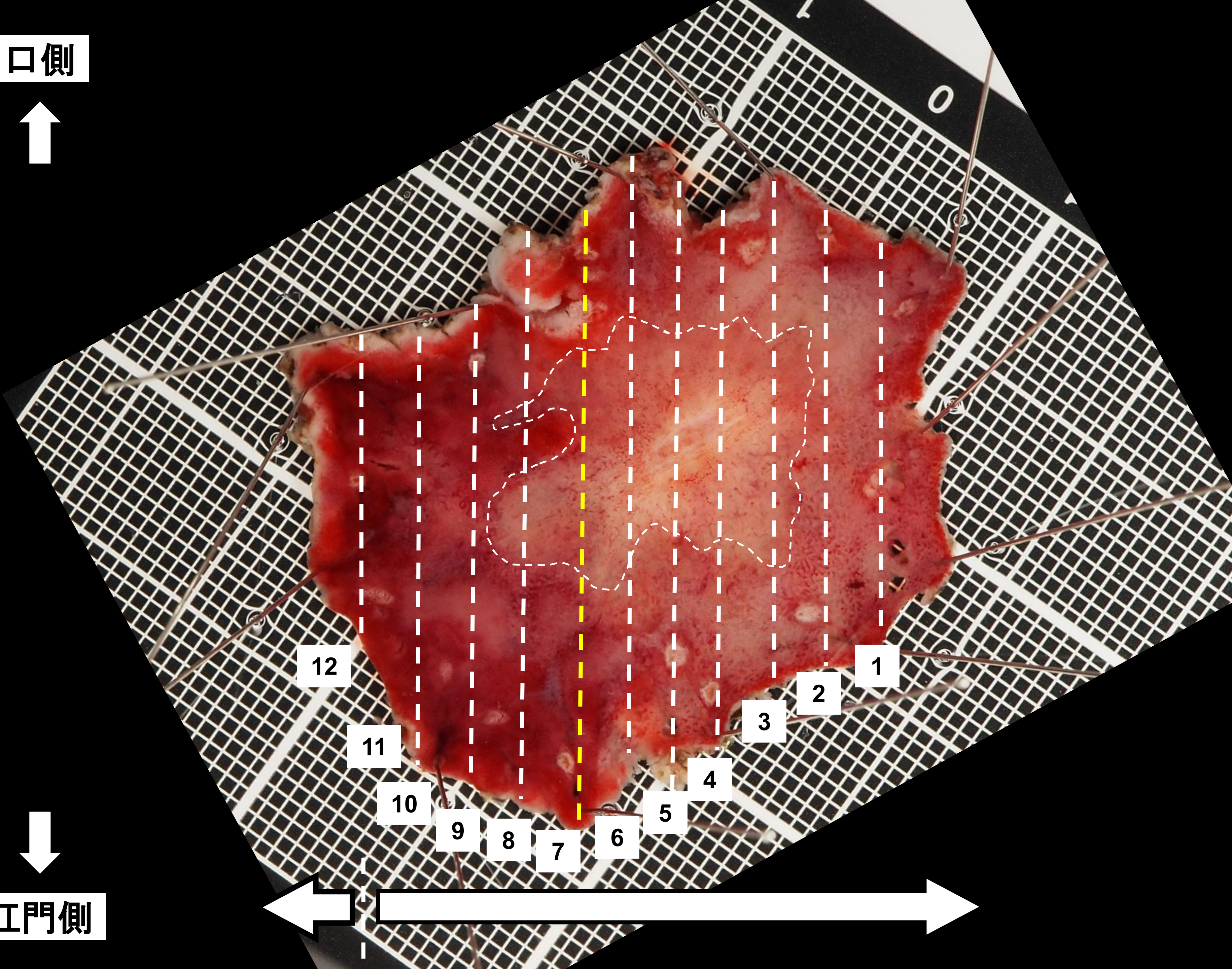
口側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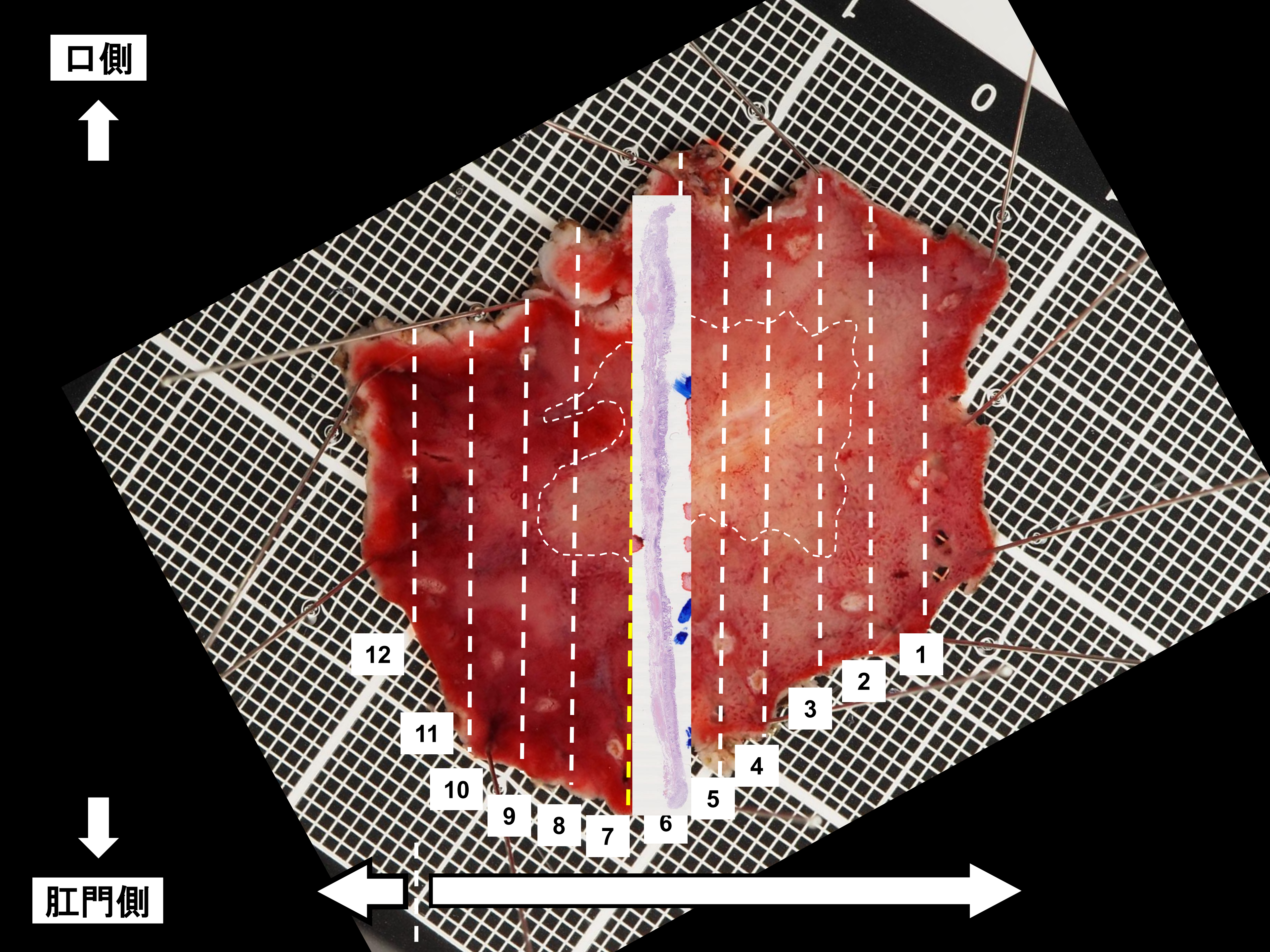
肛門側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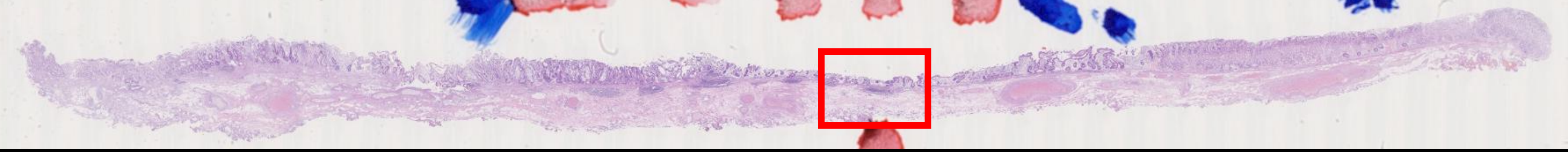

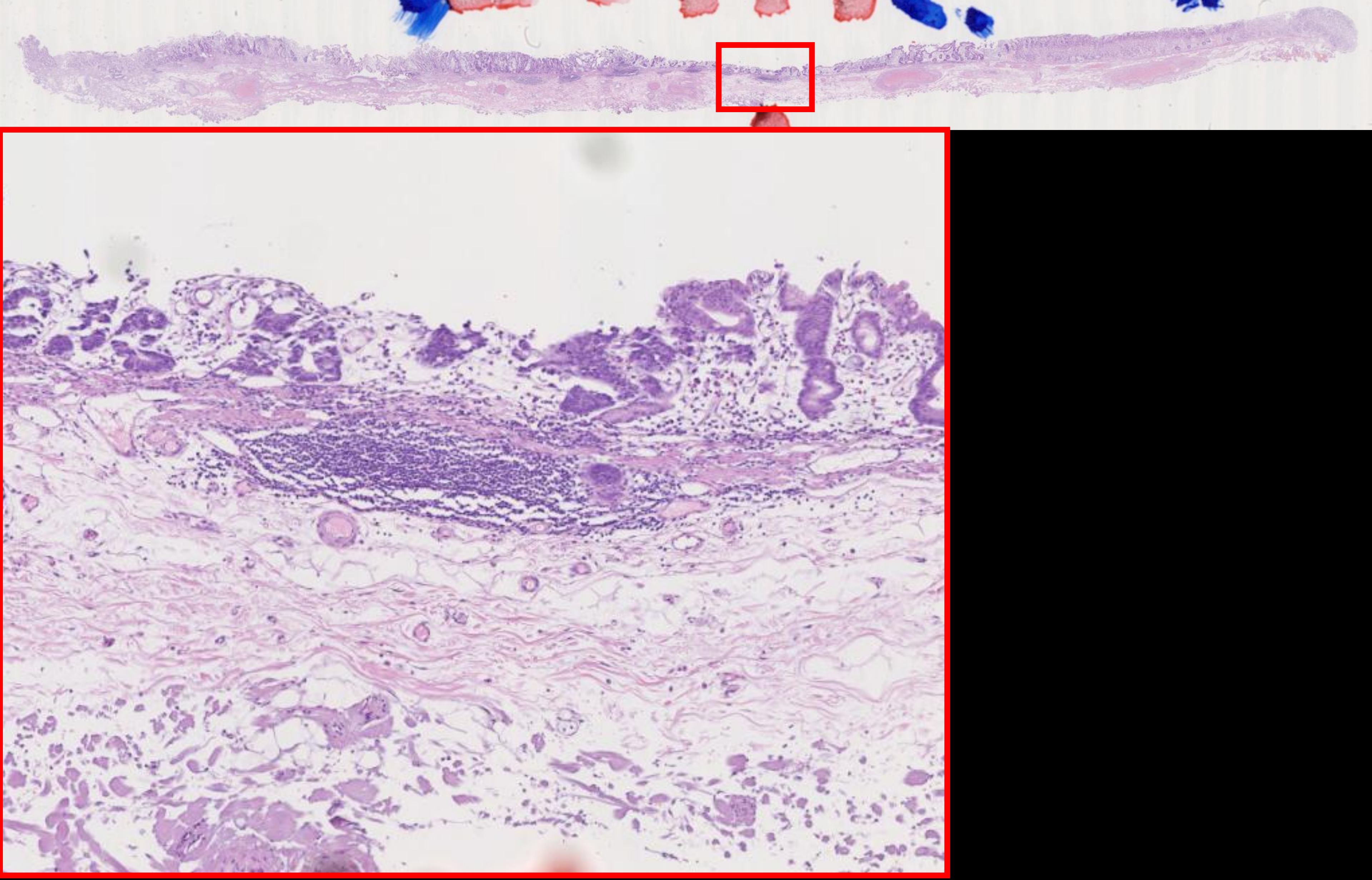

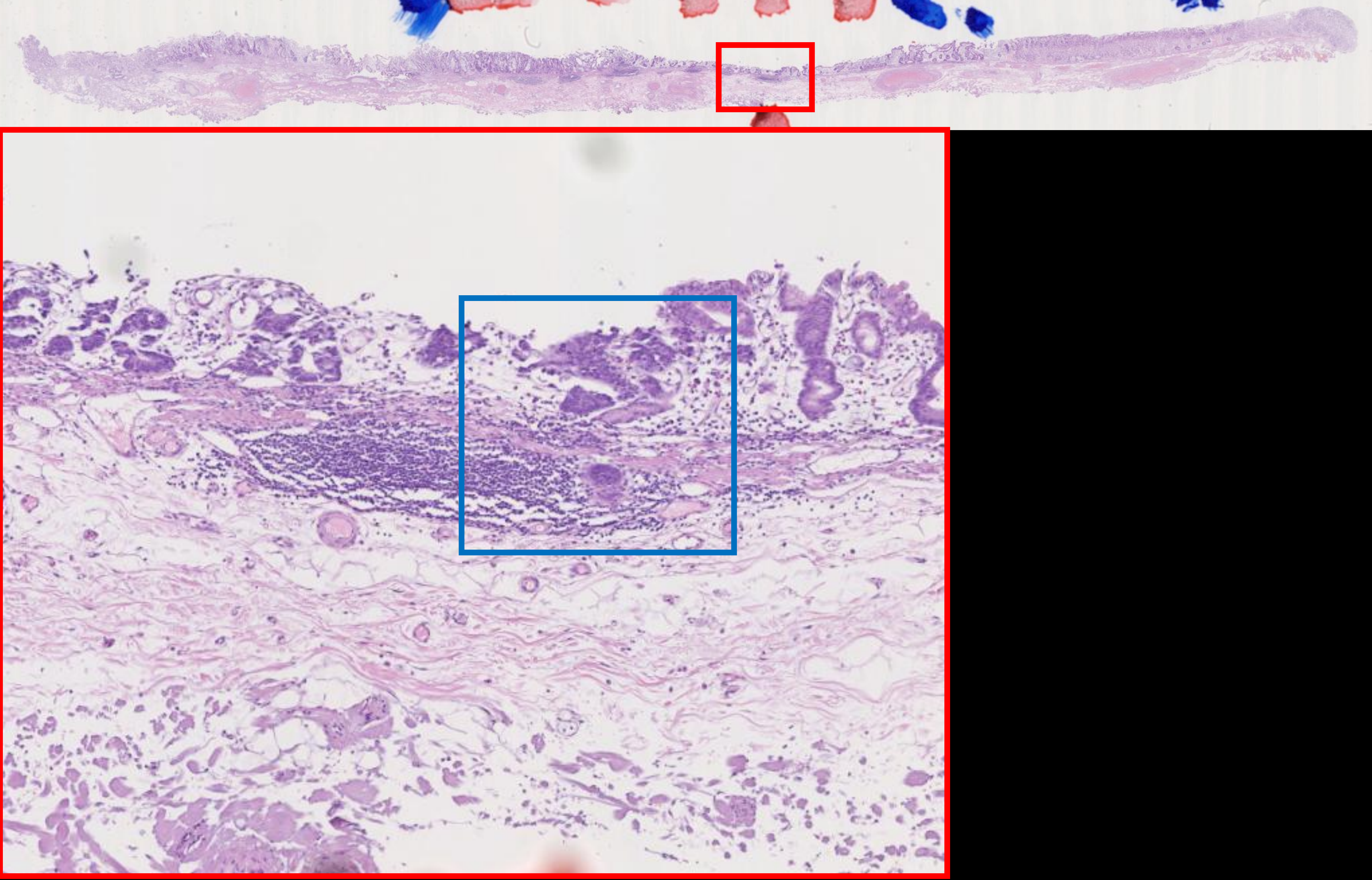

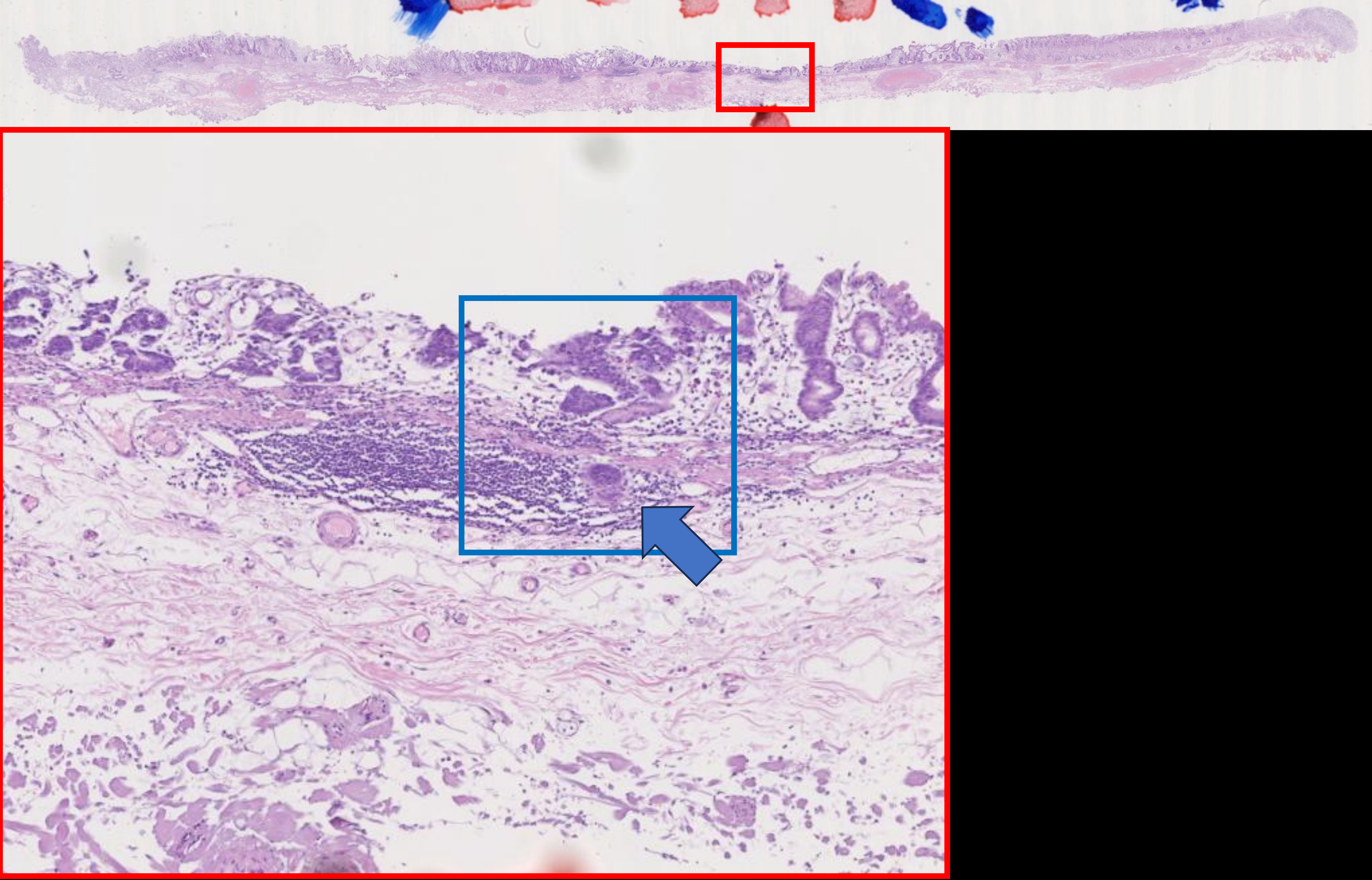

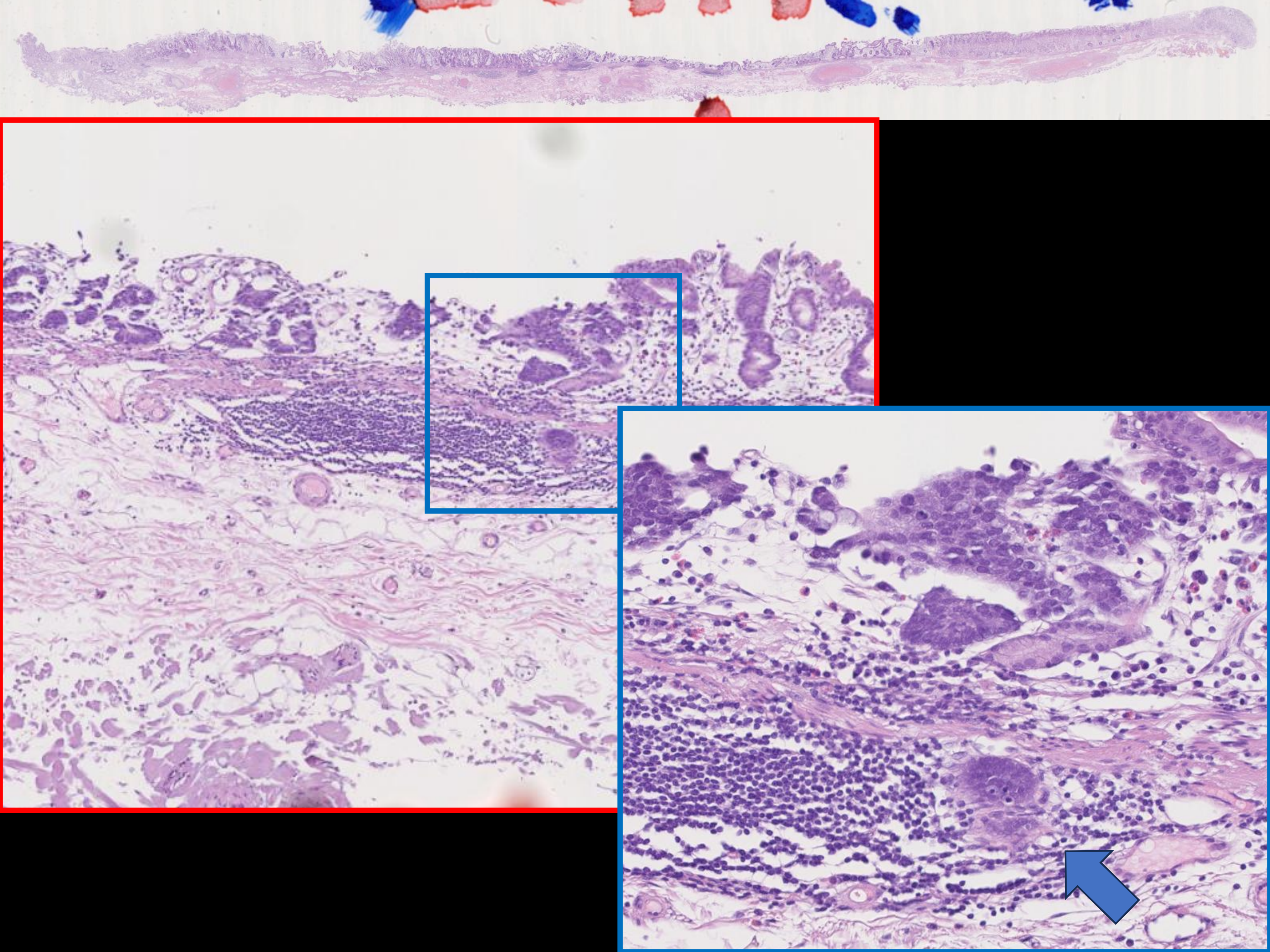

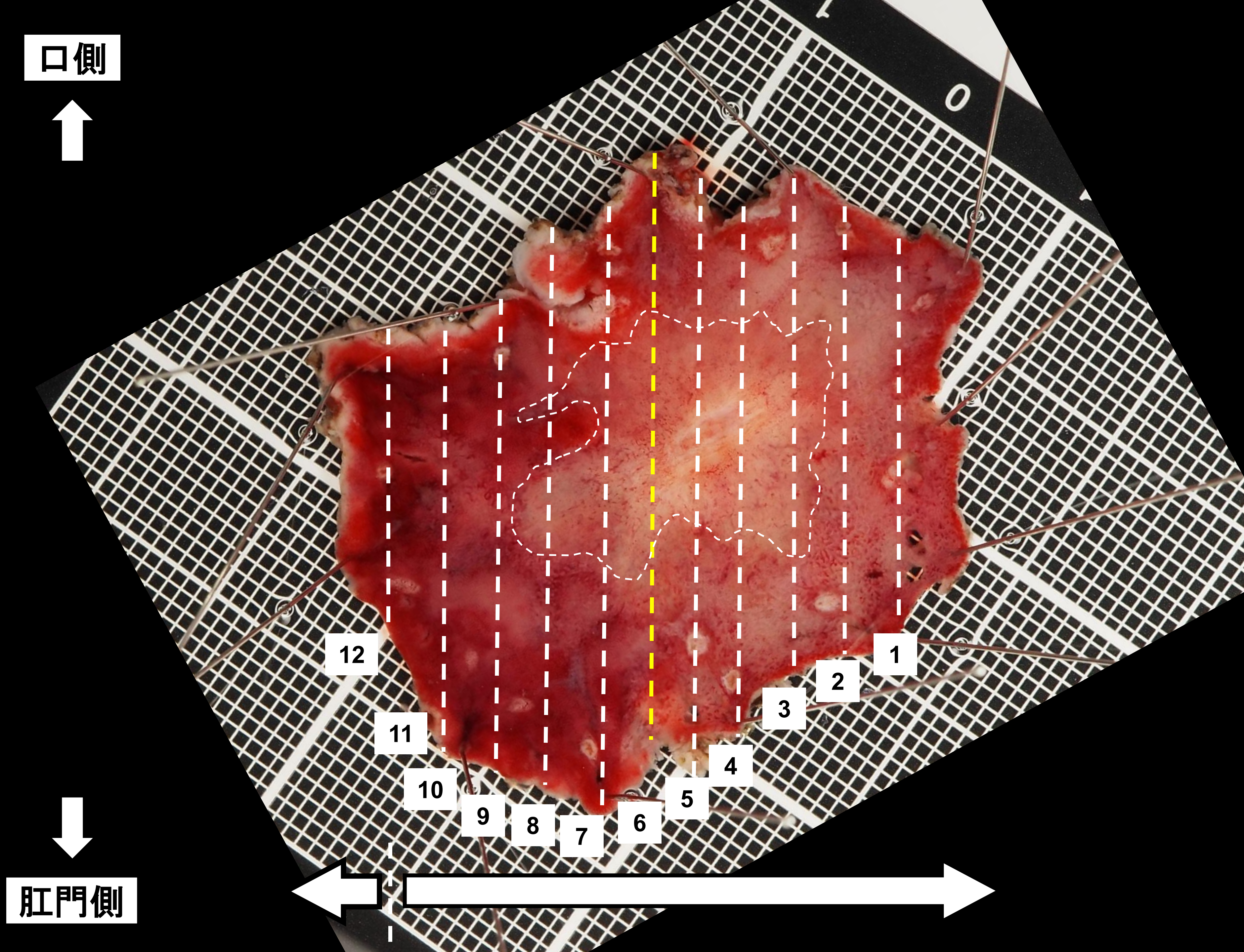
口側
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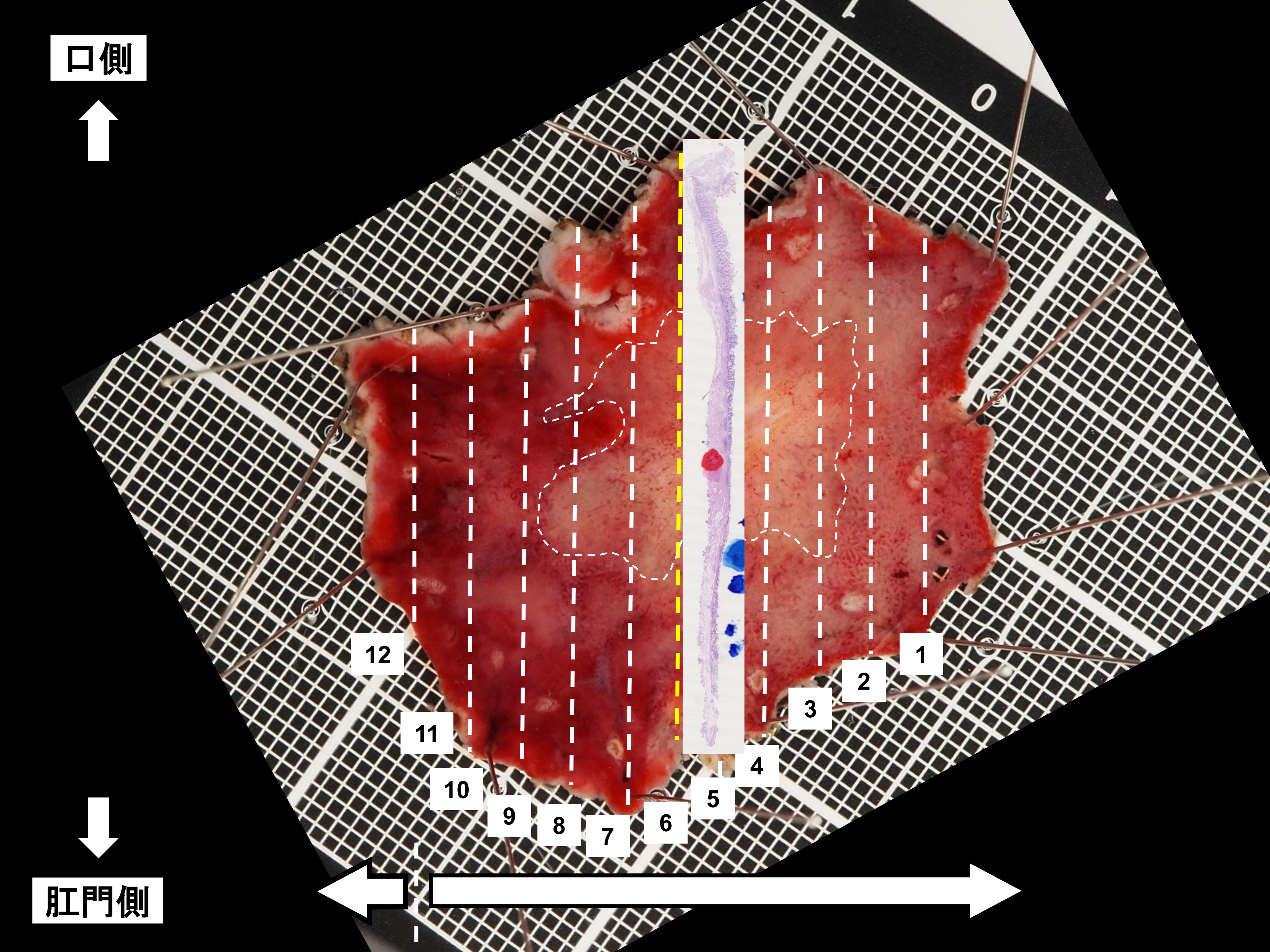
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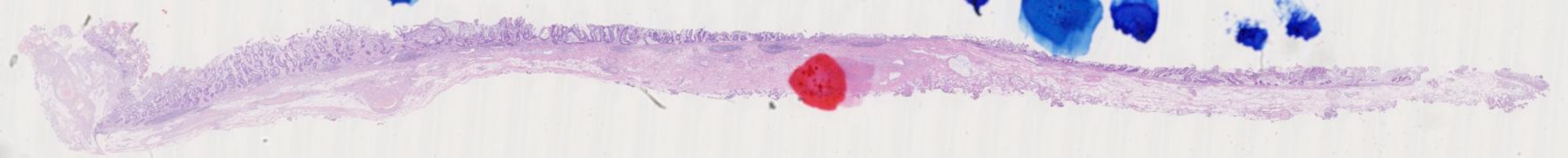
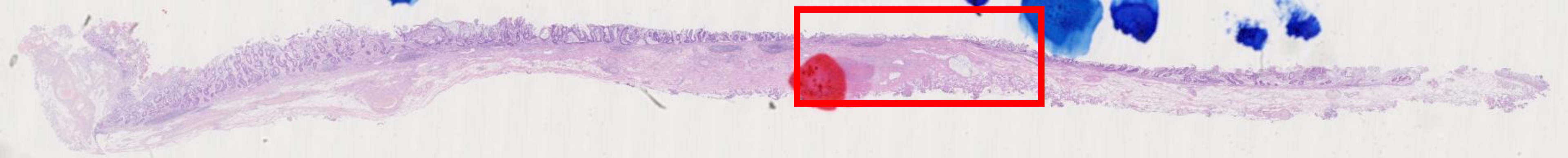
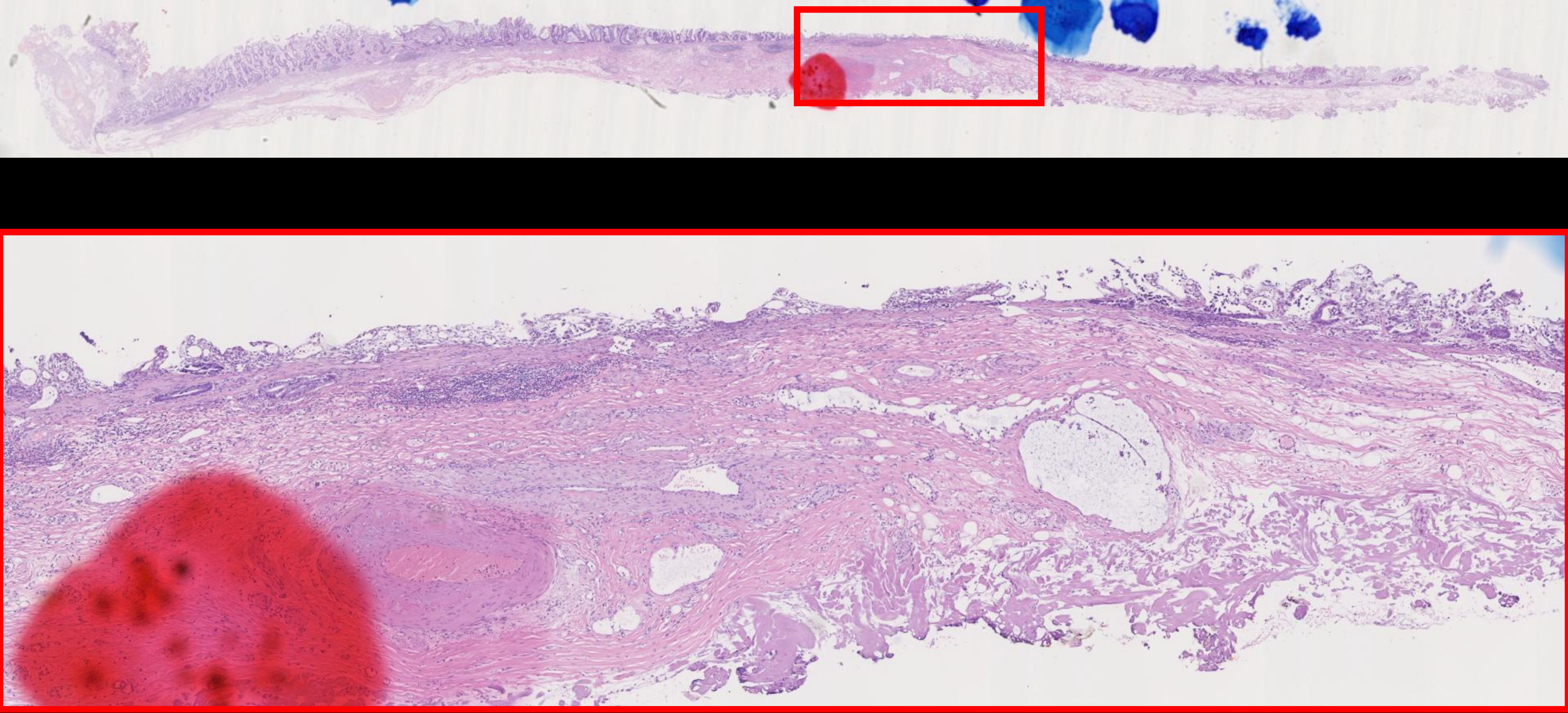
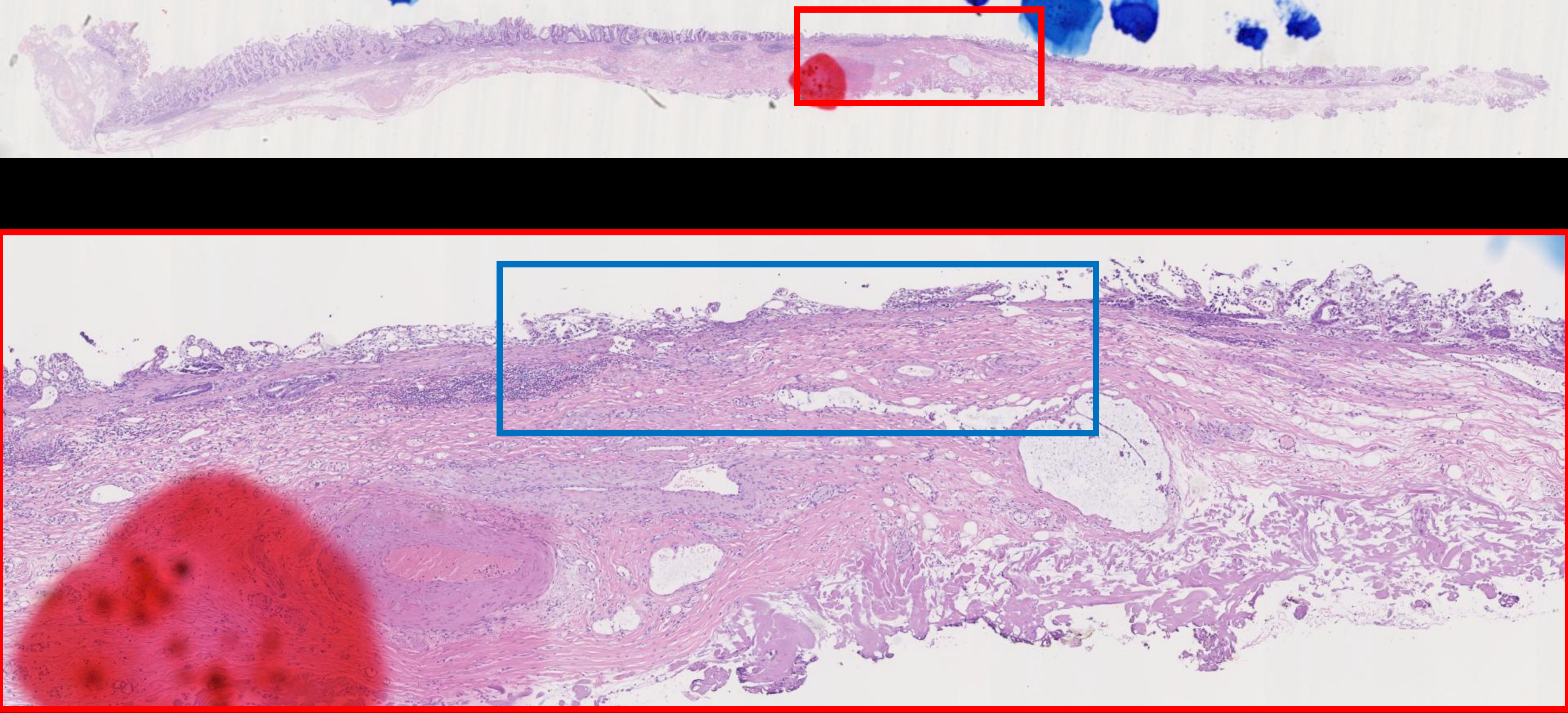
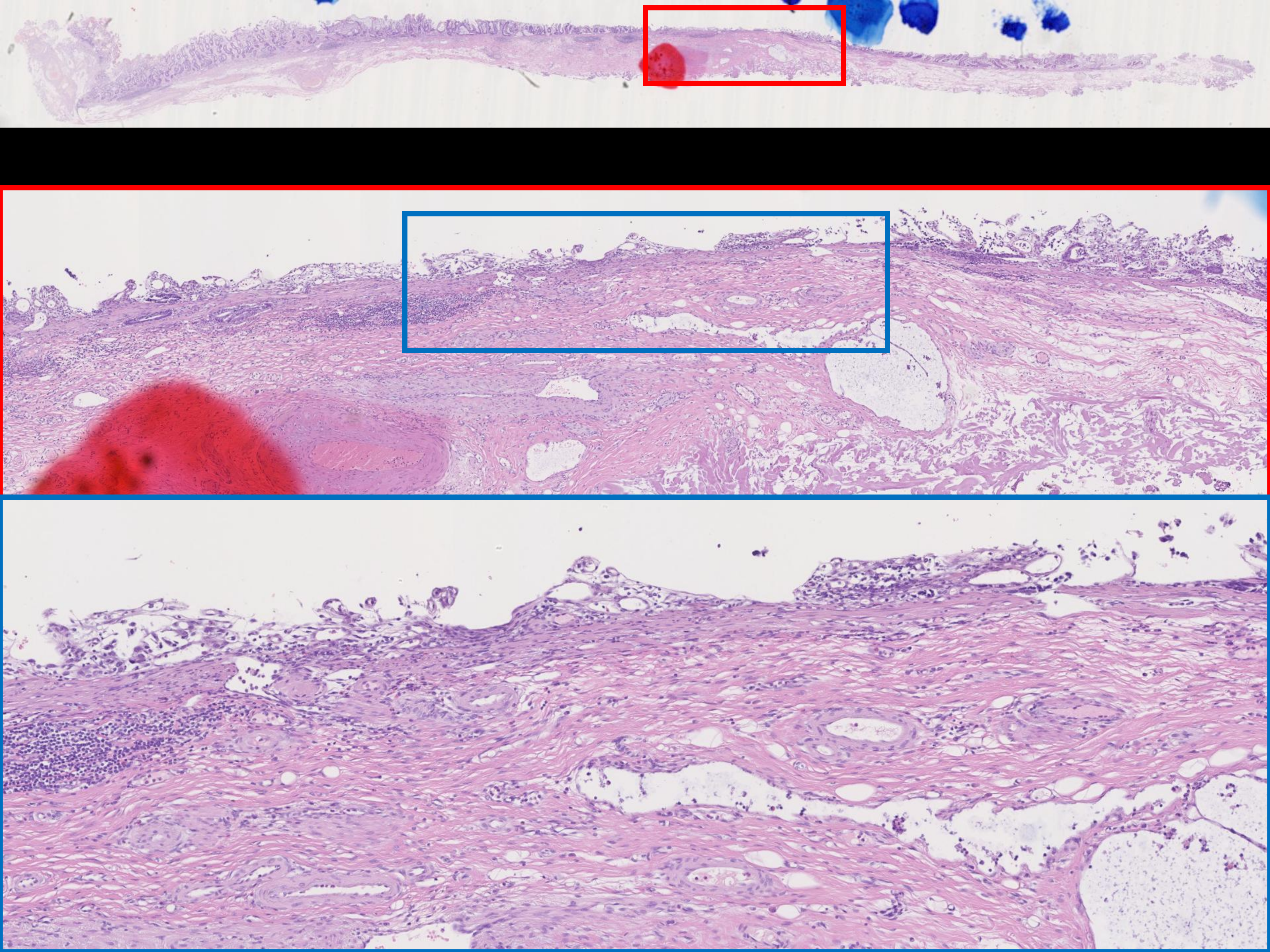
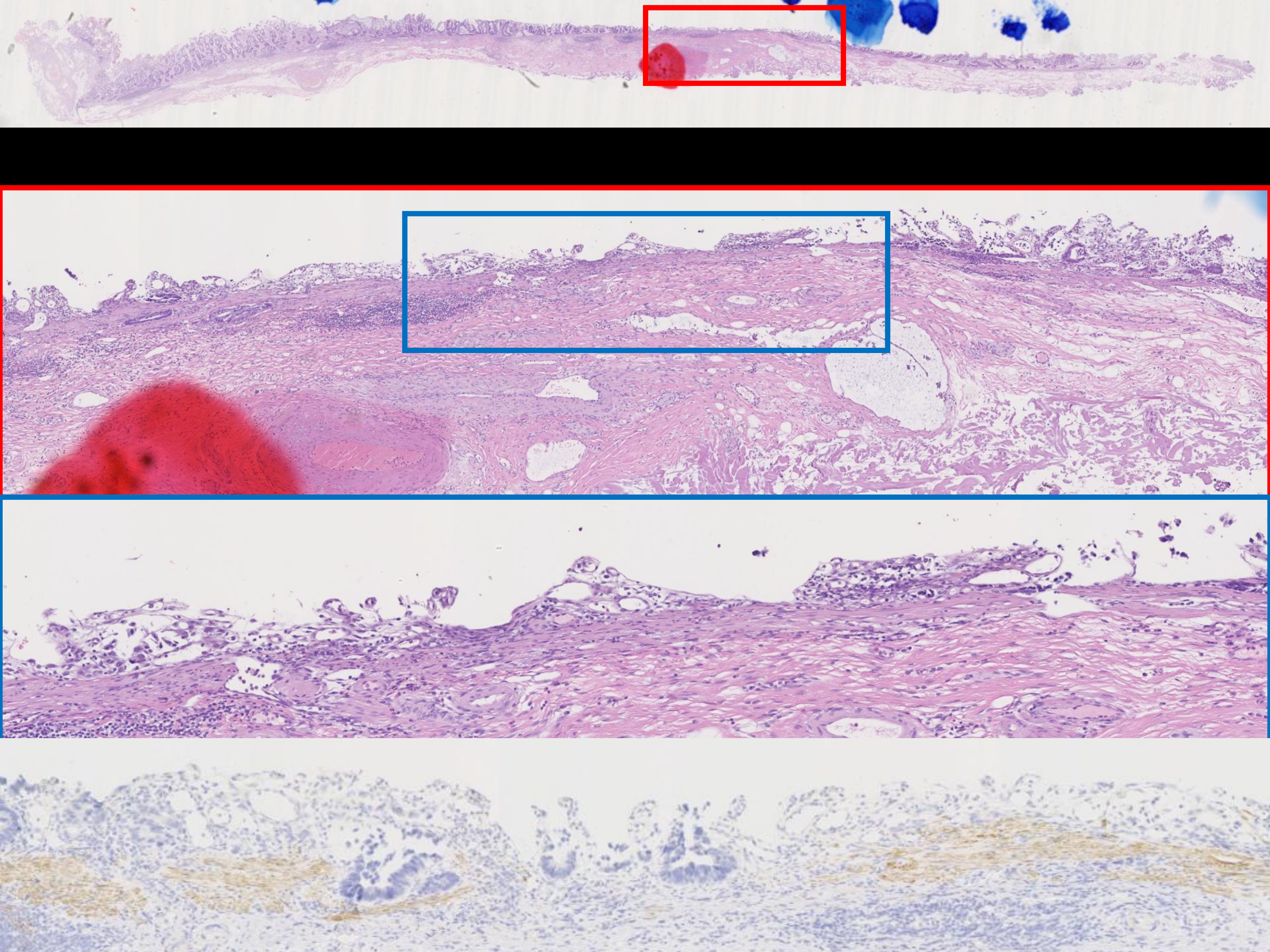










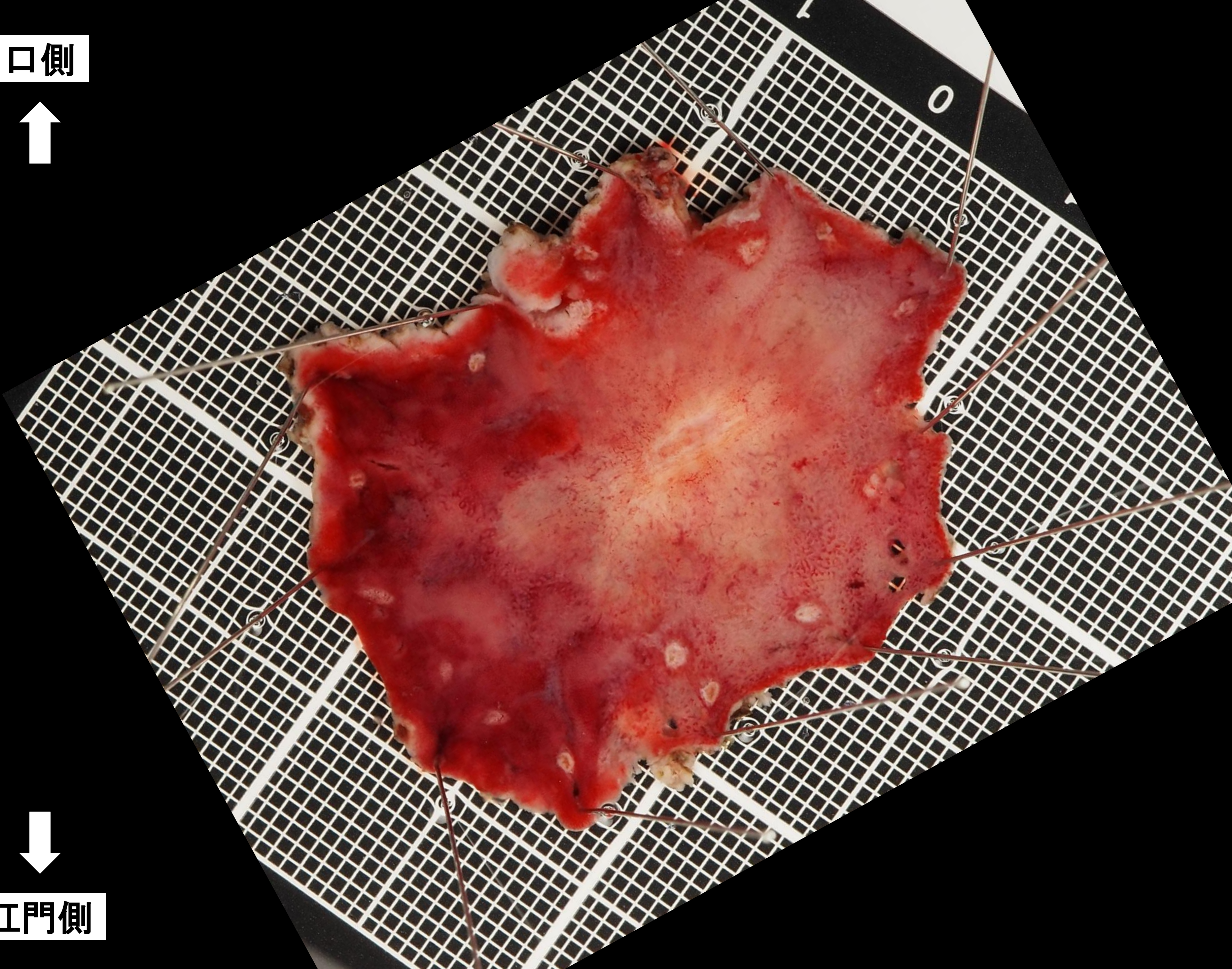


病理診断

tubular adenocarcinoma,
moderately differentiated(tub2>tub1>muc),
T1b1, SM1, early, UL1, Ly0, V0, HM0, VM0.
eCure B

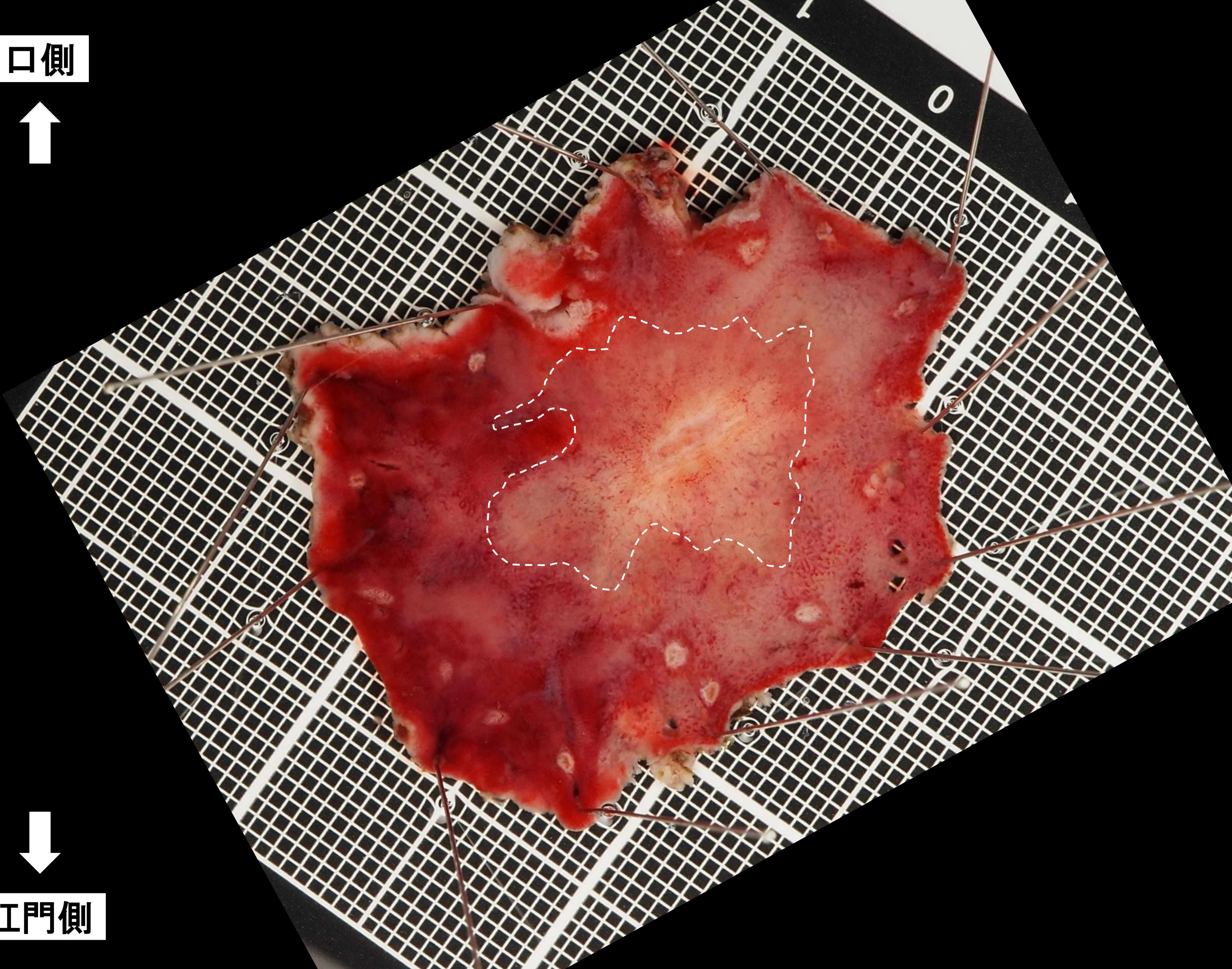
mapping

口側



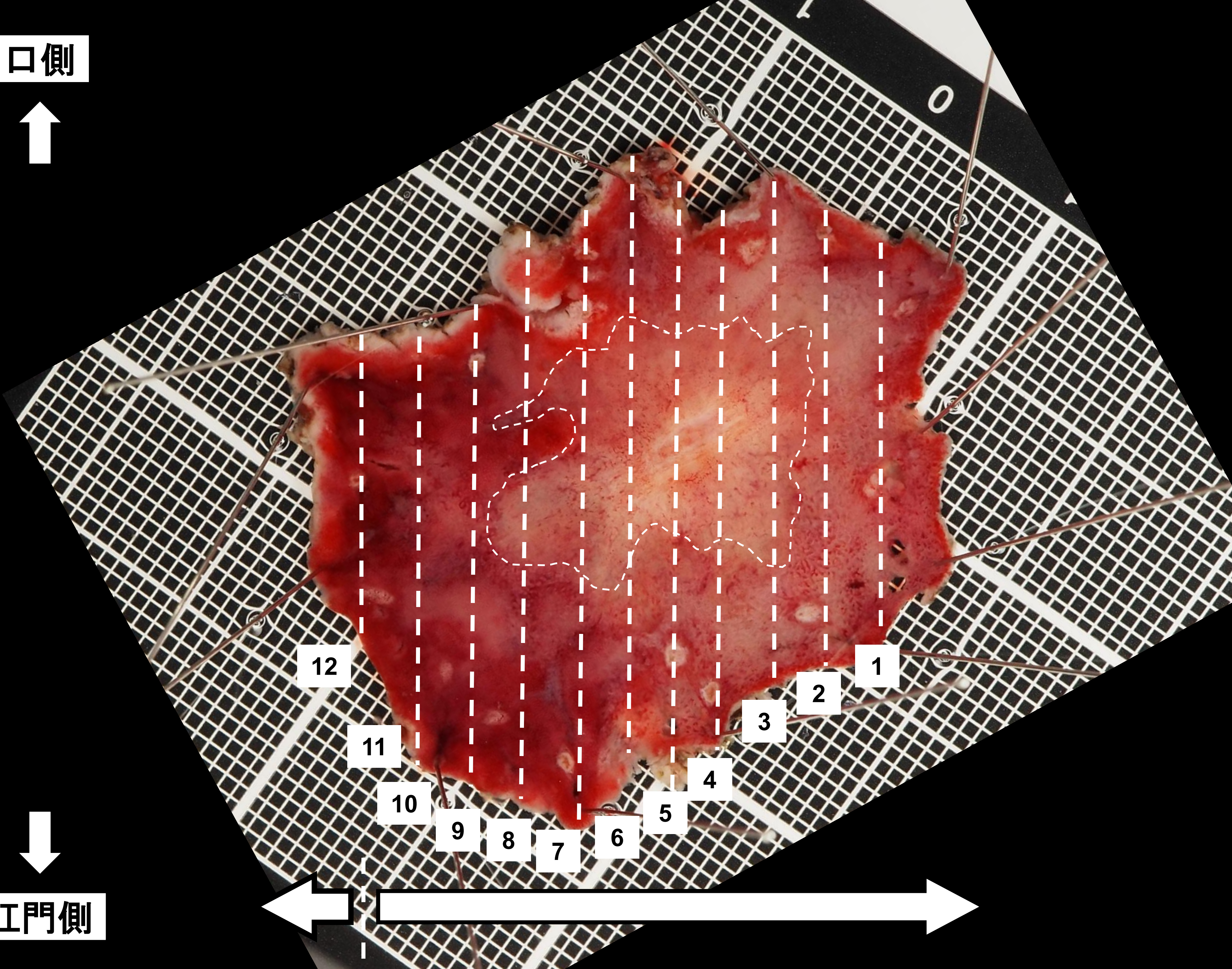
肛門側

口側



肛門側

口側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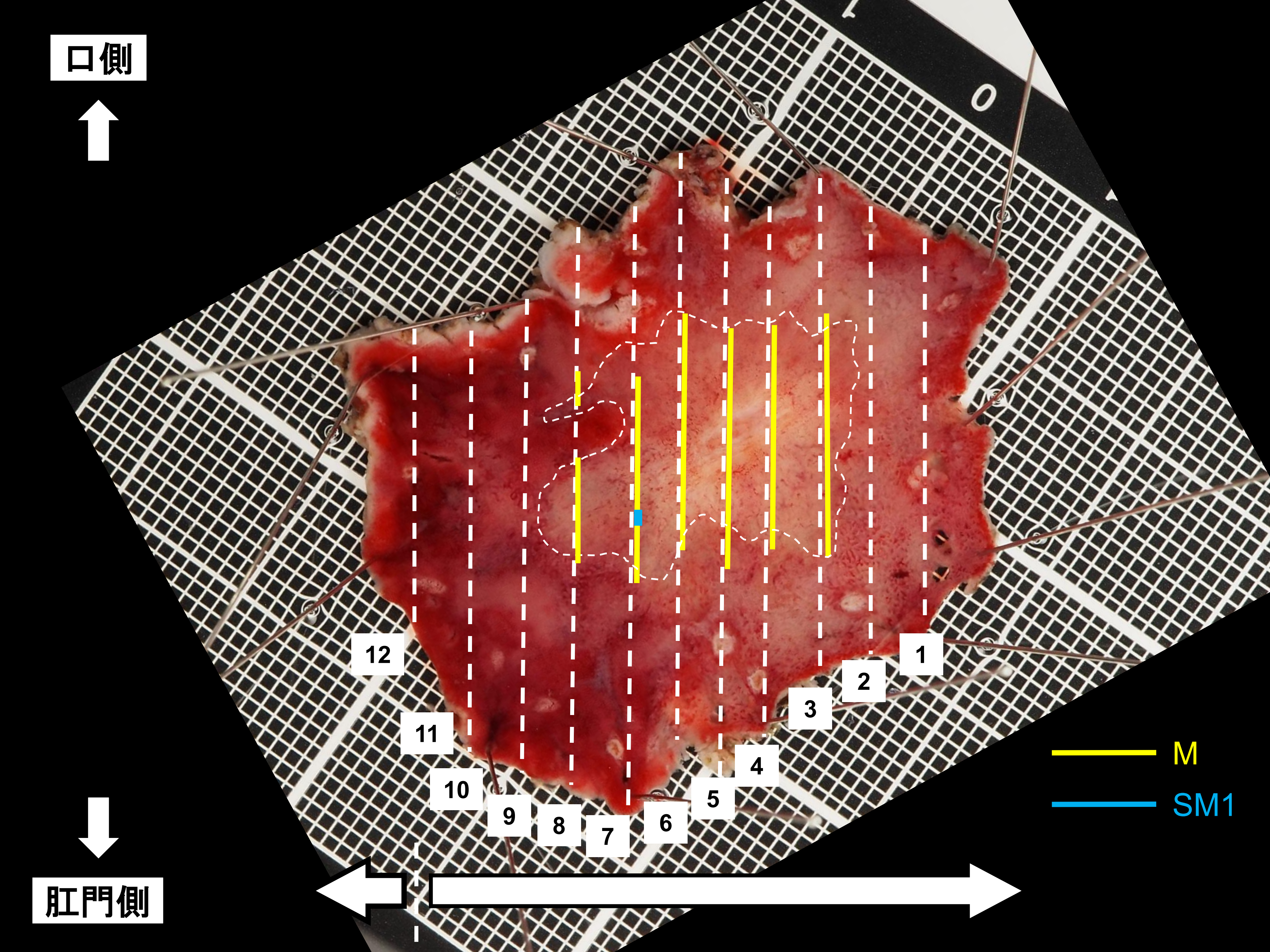
肛門側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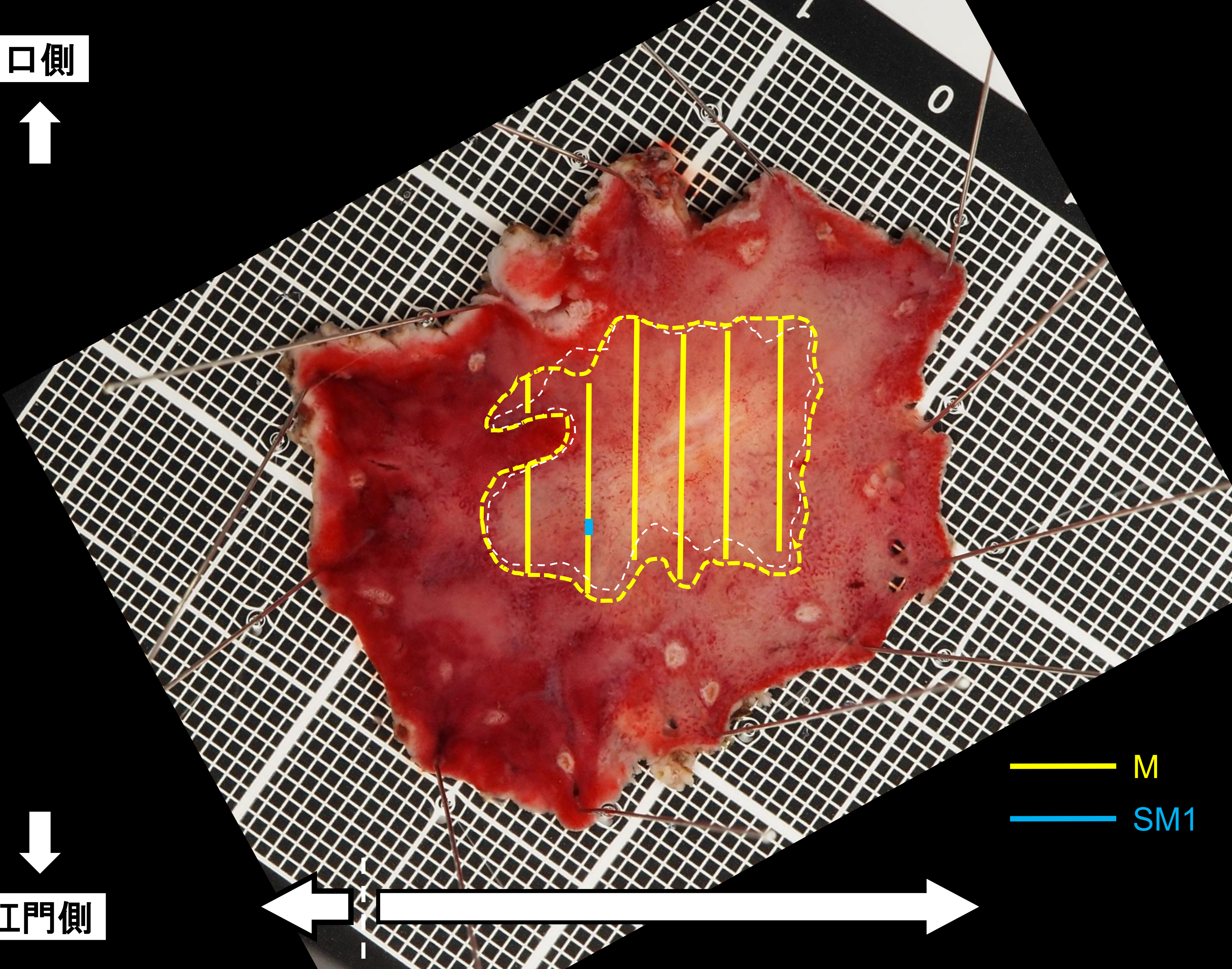
M
SM1

口側

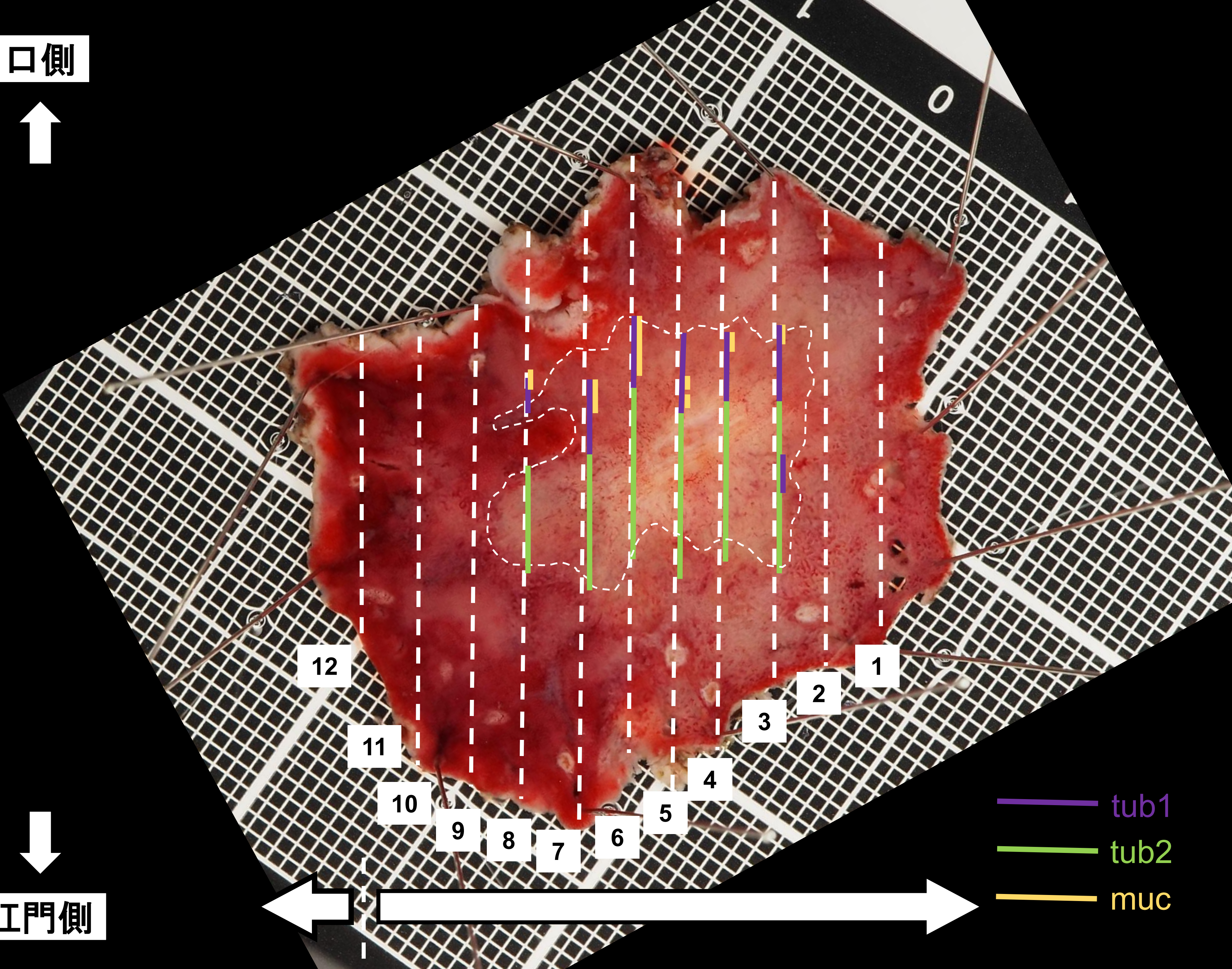


肛門側

M

SM1

口側


12
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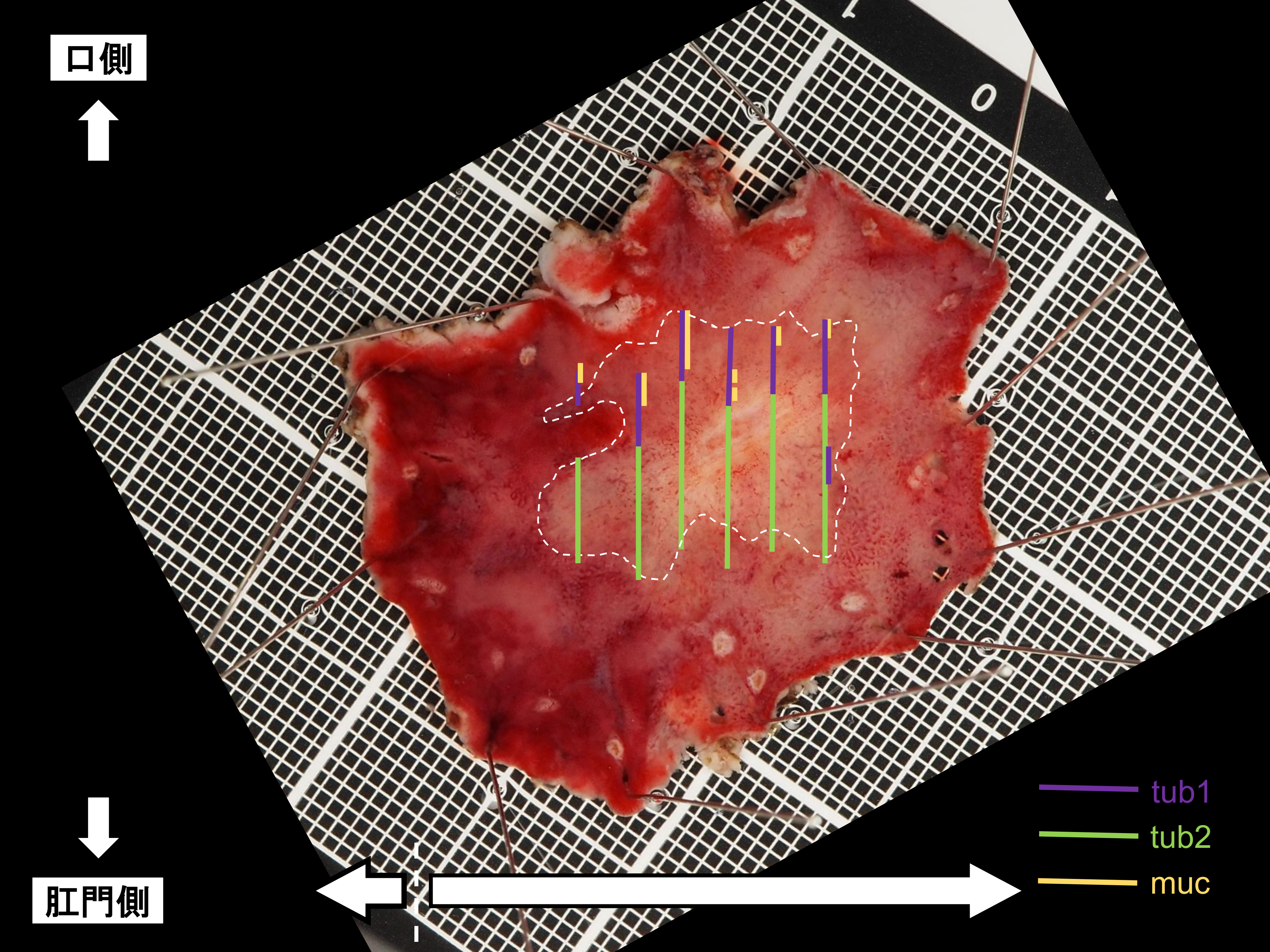
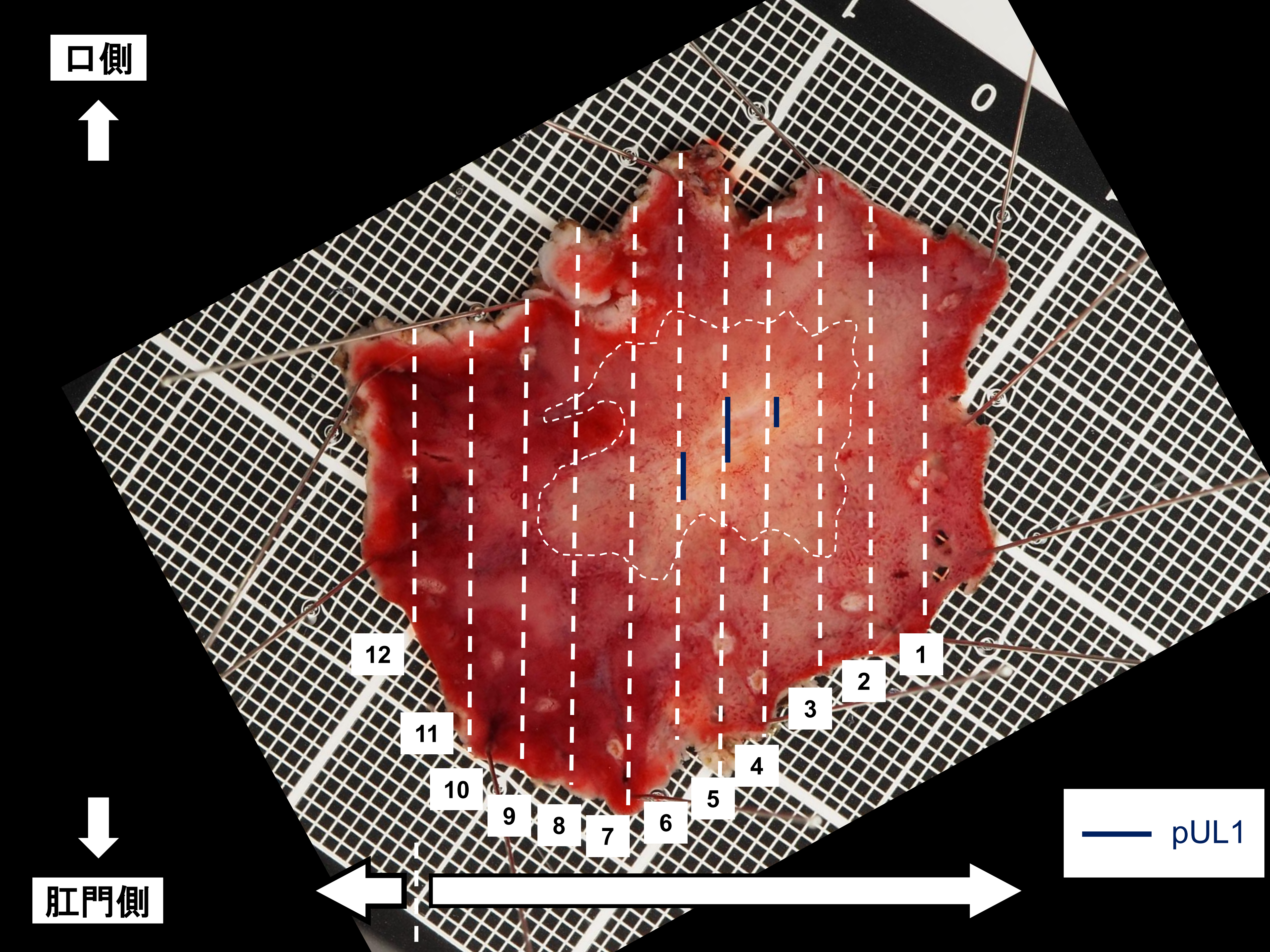
tub1
tub2
muc

肛門側


口側
肛門側
tub1
tub2
muc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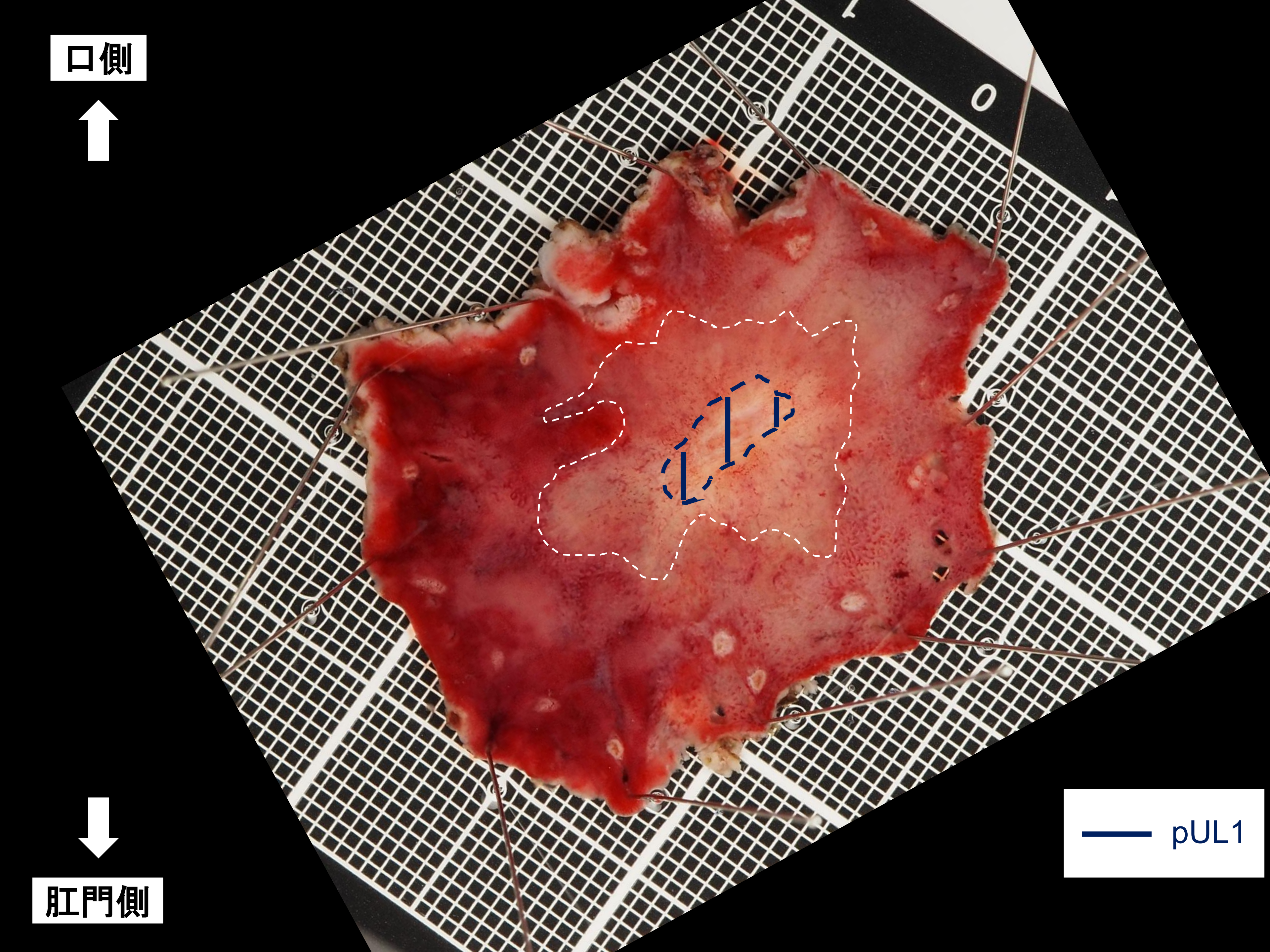
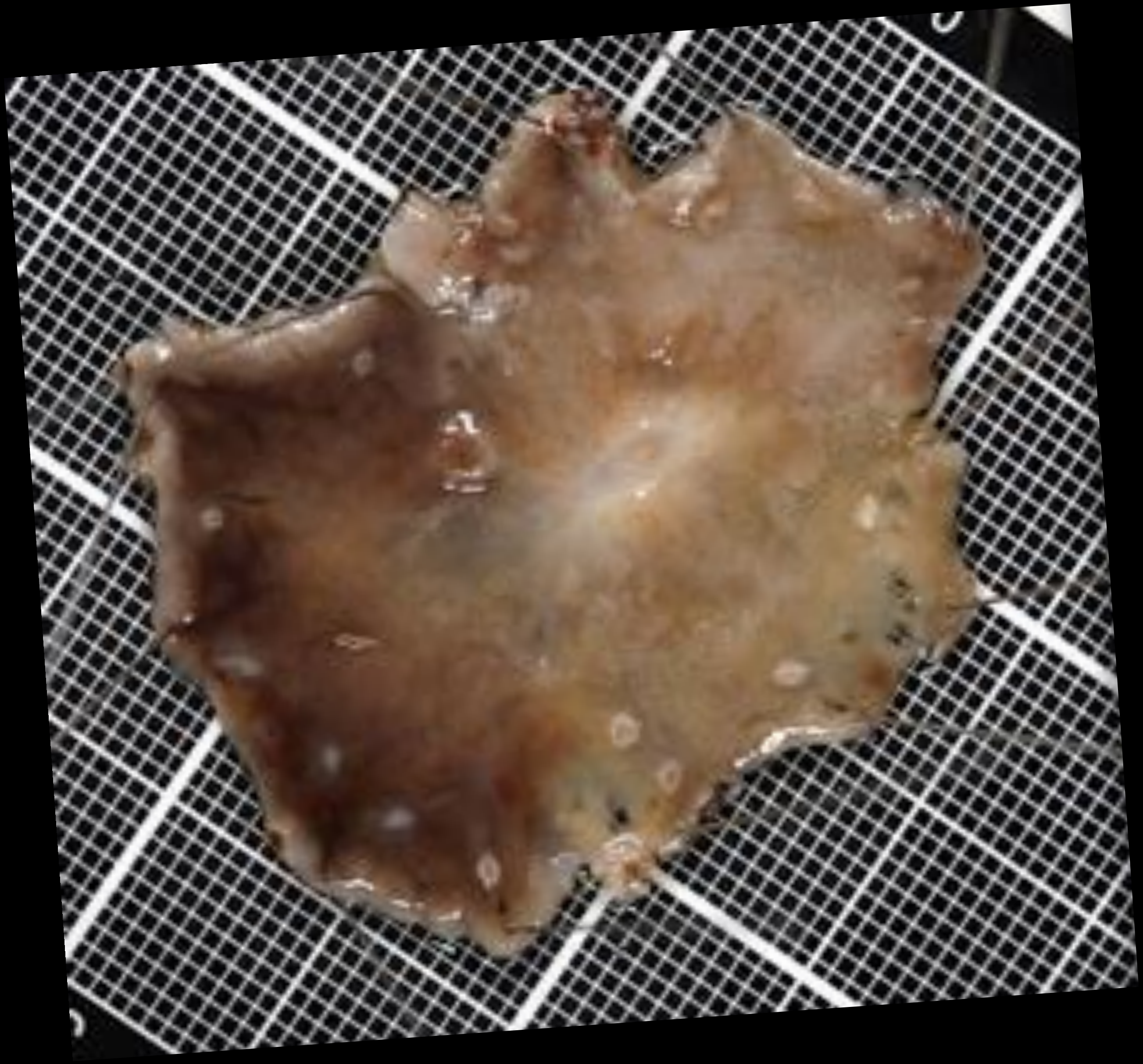
pUL1


口側
肛門側
pUL1

口側

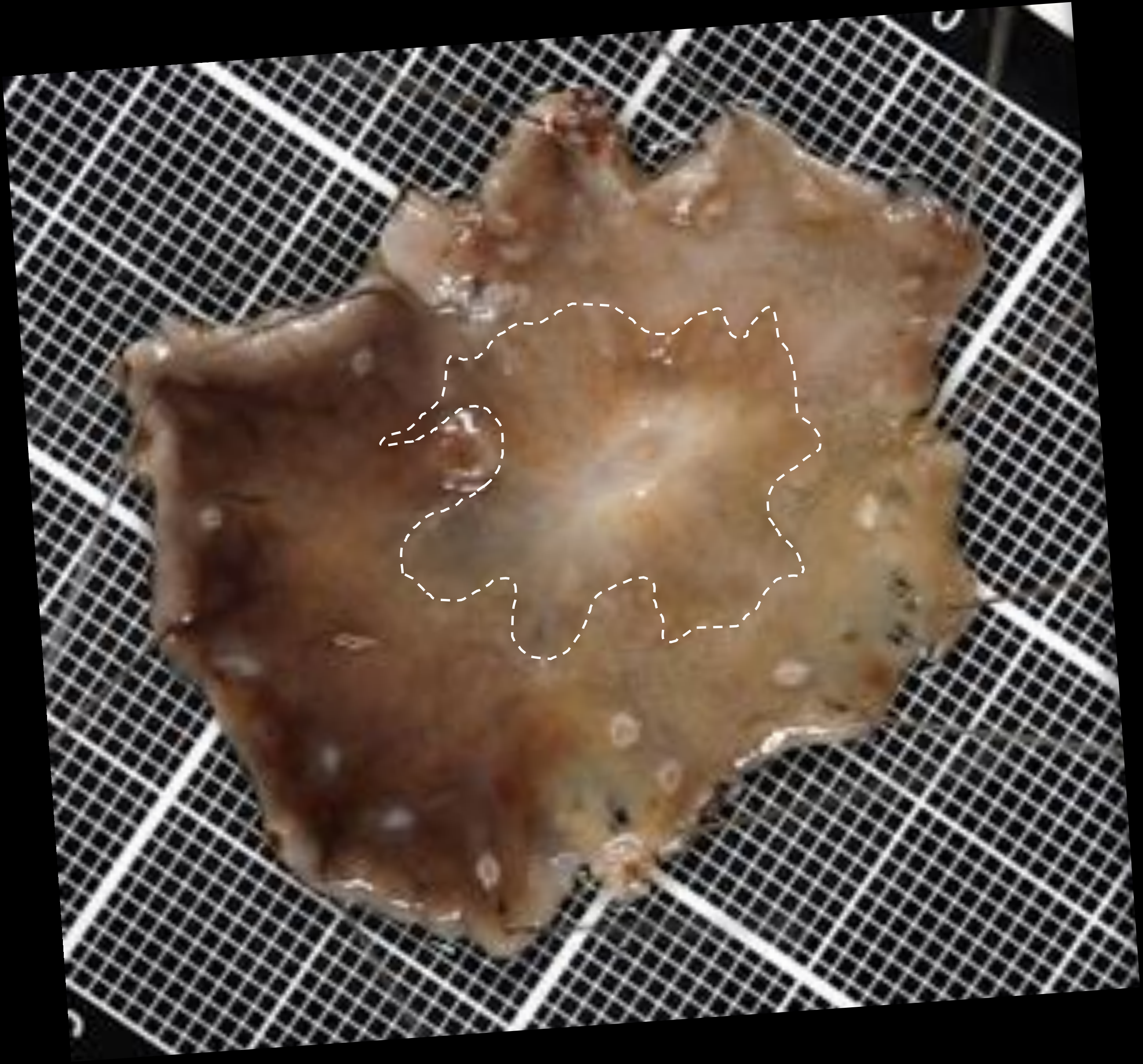
⬆



⬇

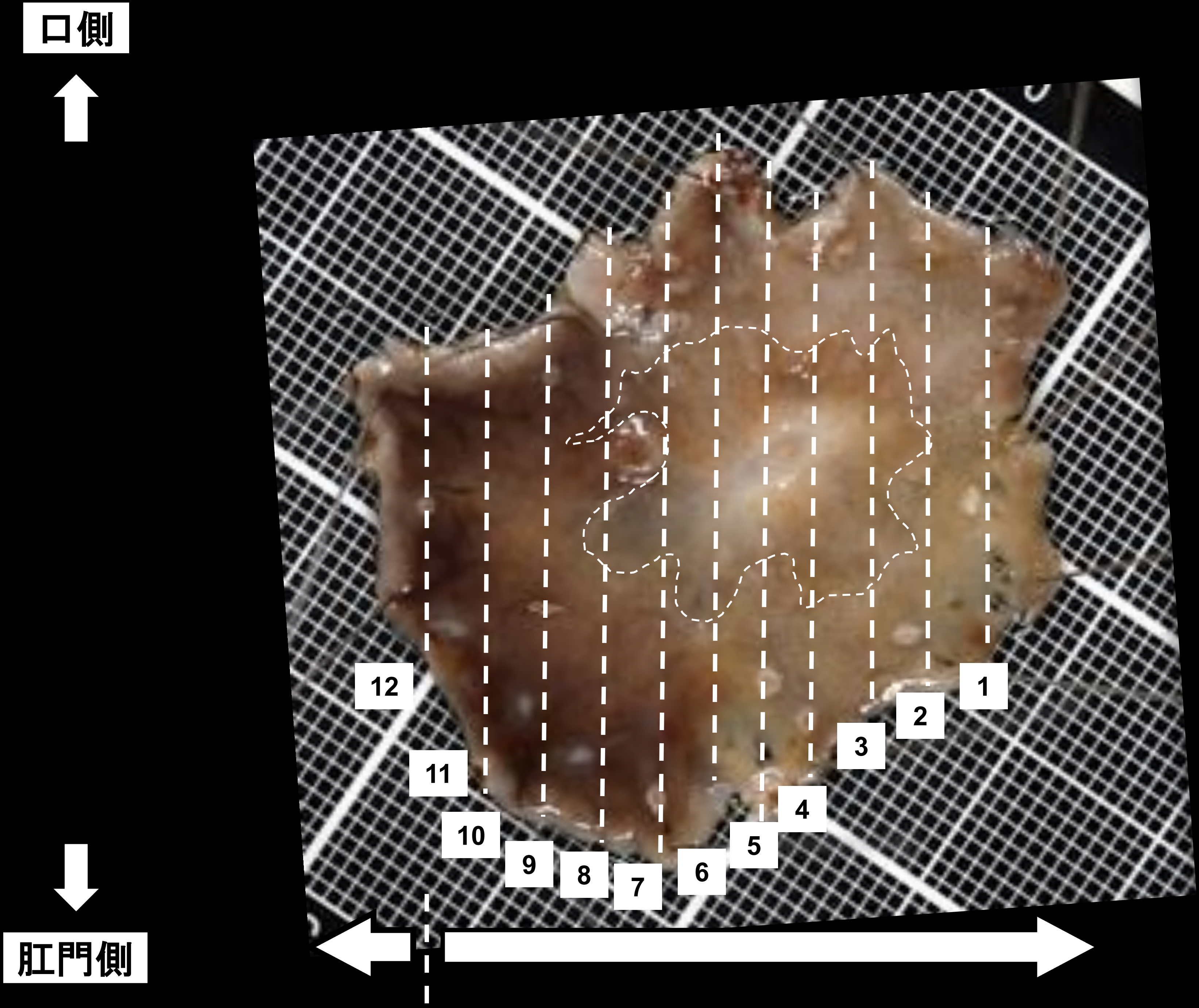
肛門側

口側



肛門側

口側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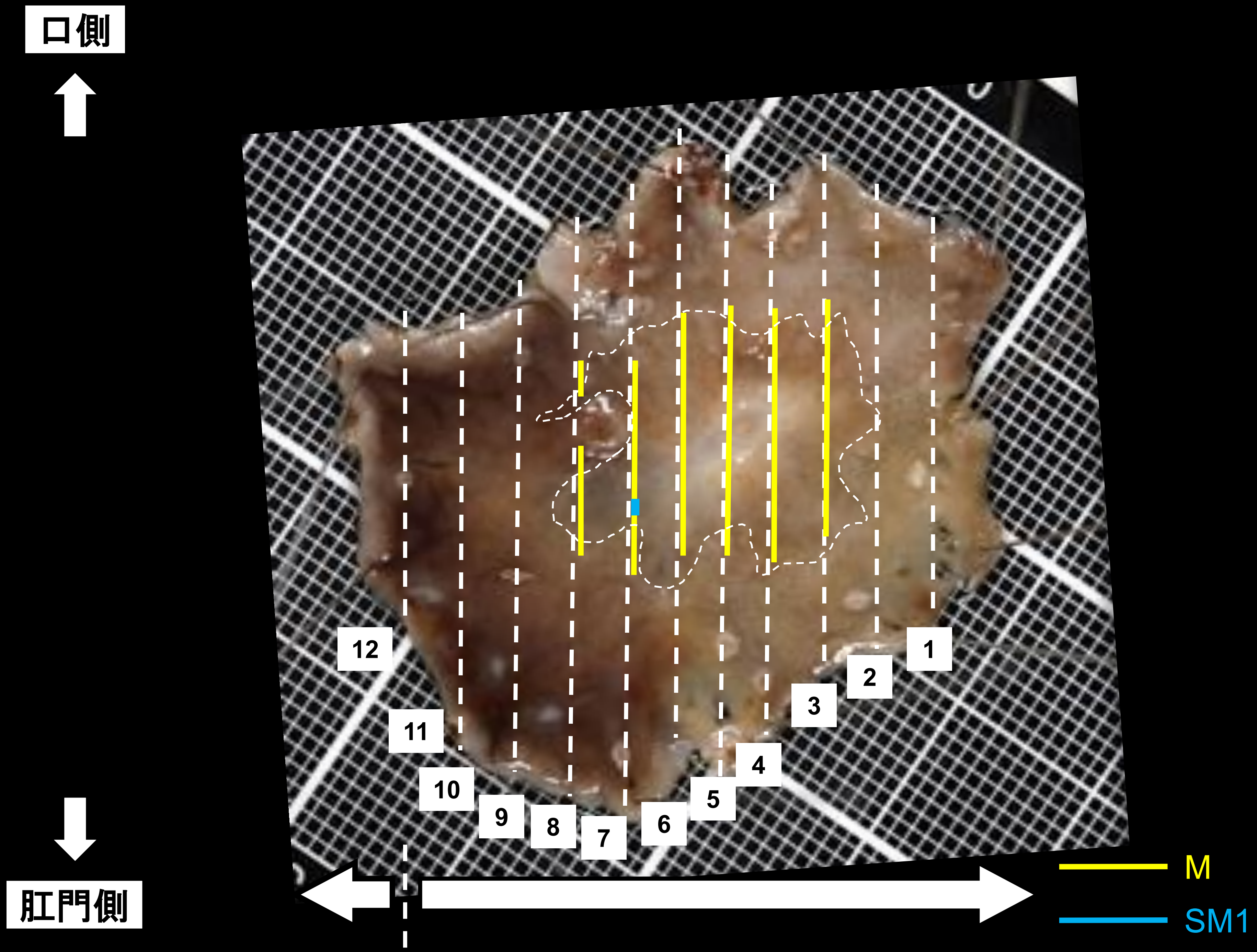
肛門側



口側
肛門側
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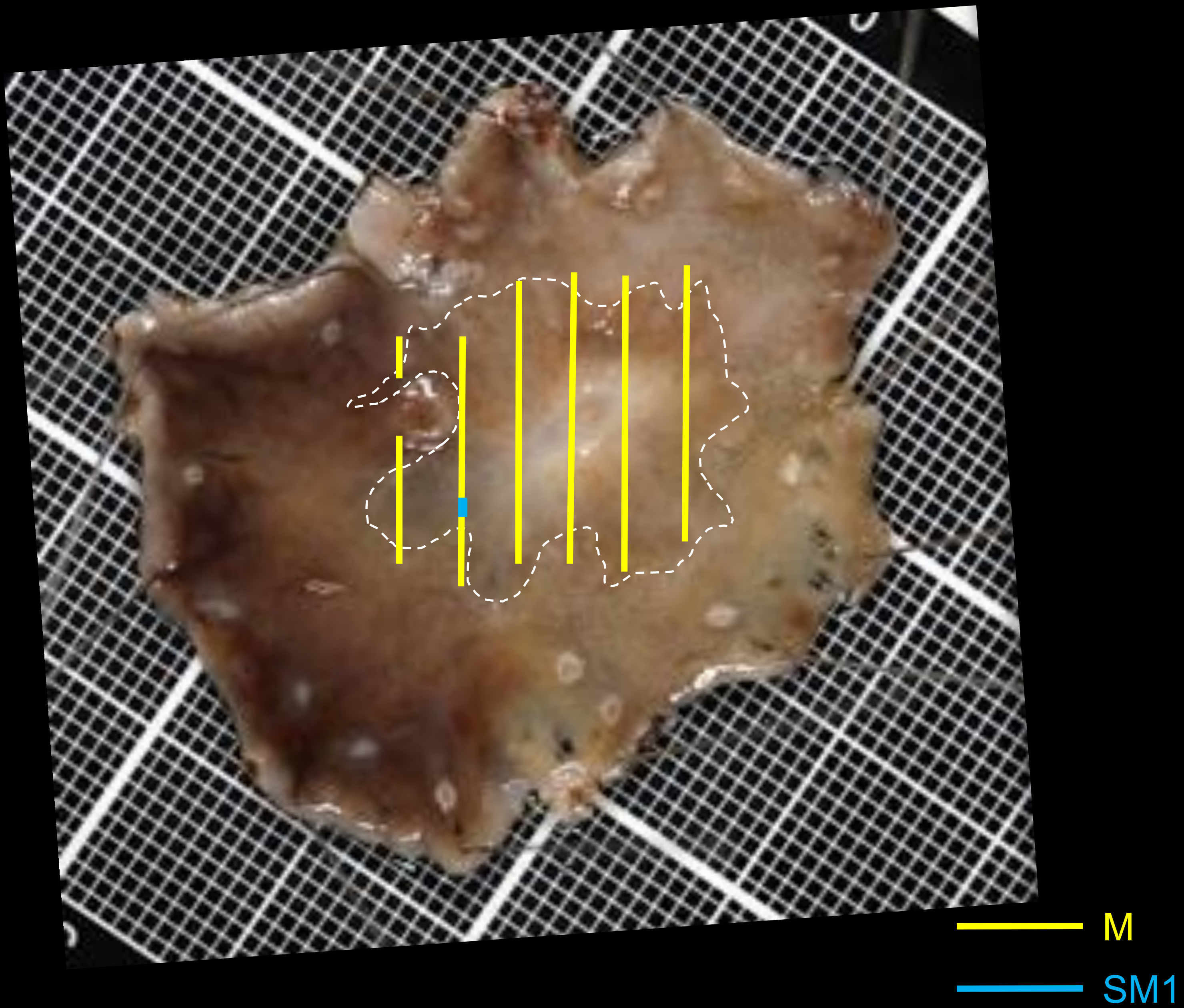
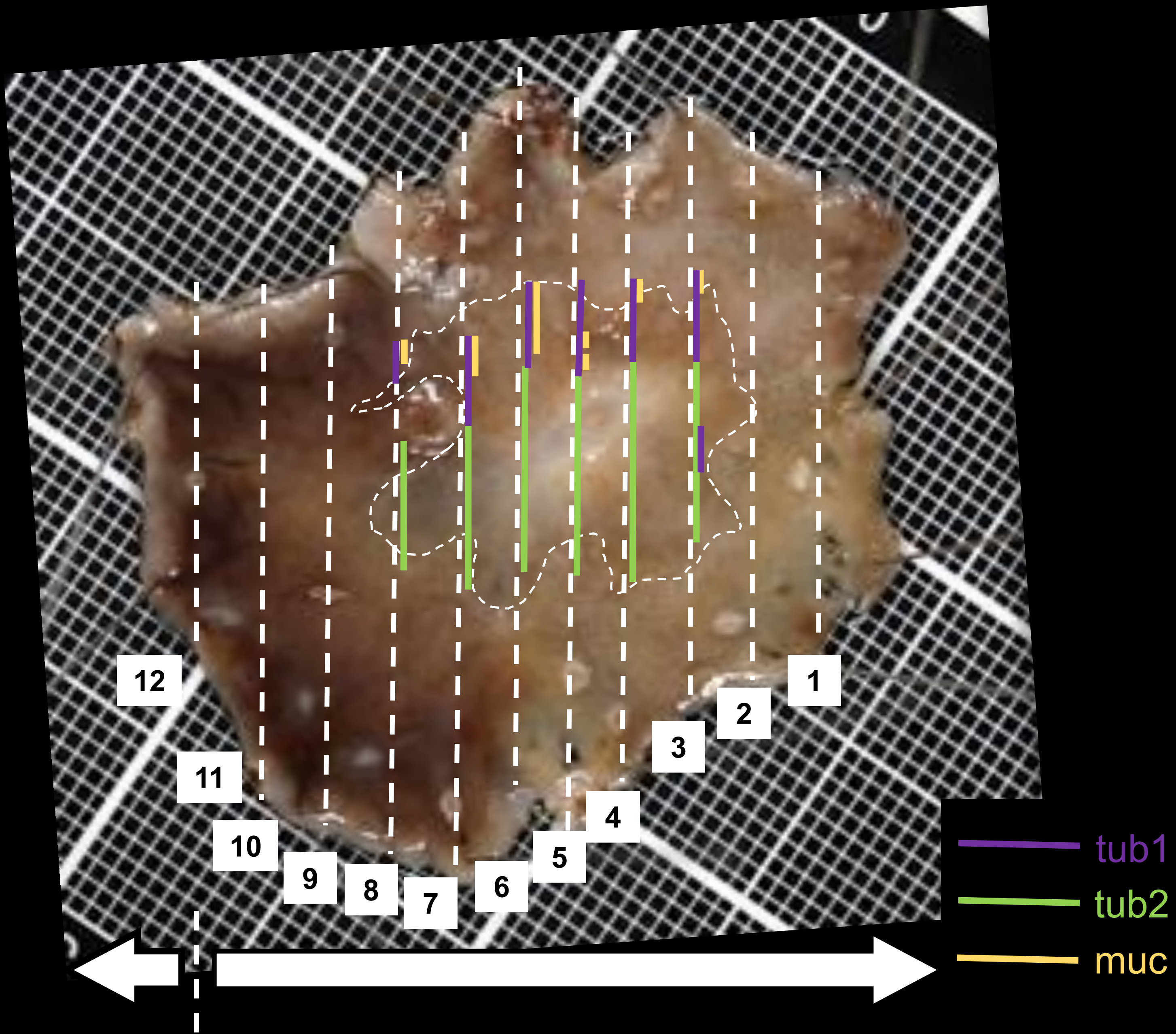
11
12
M
SM1

口側



肛門側

口側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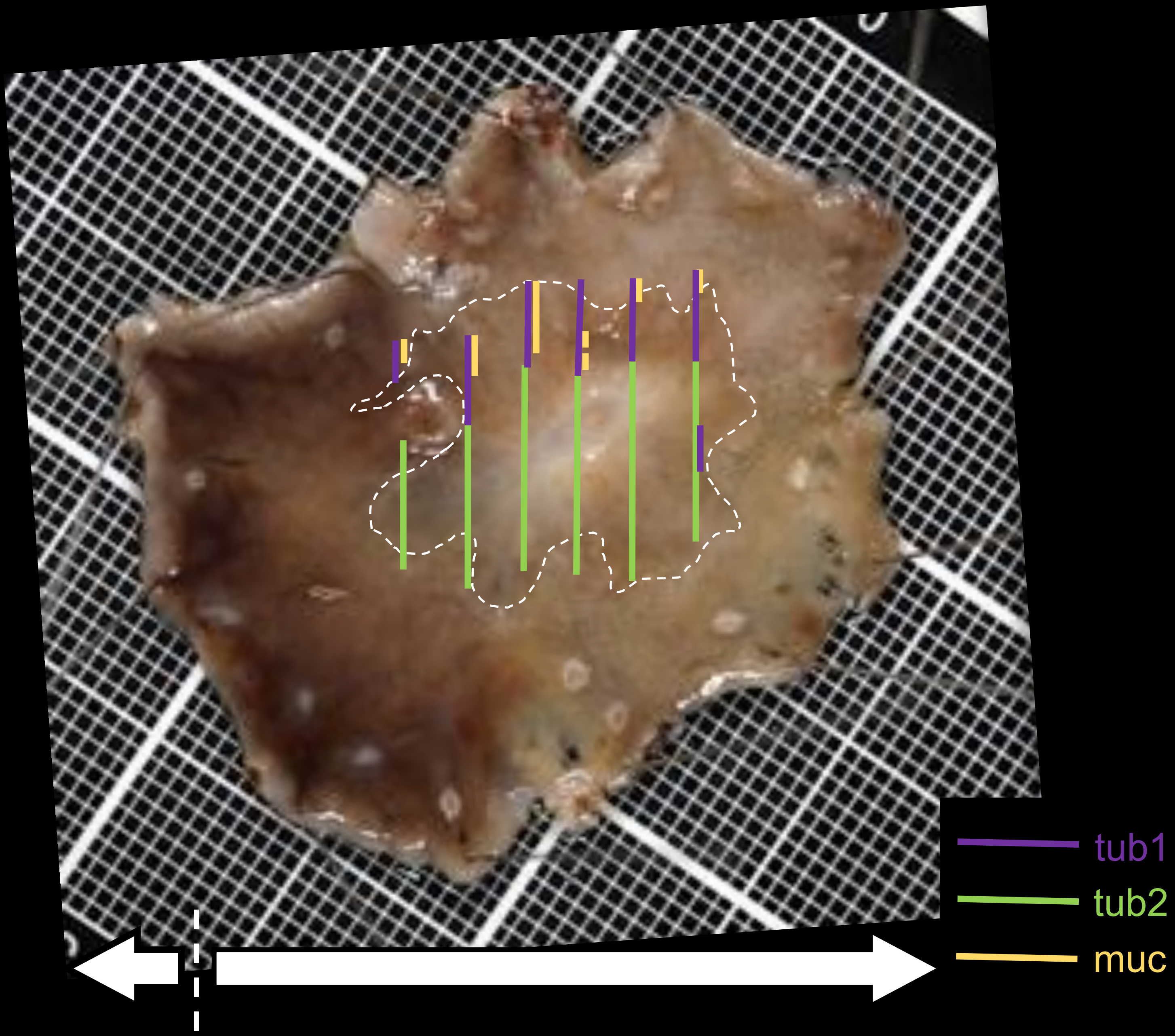
tub1
tub2
muc

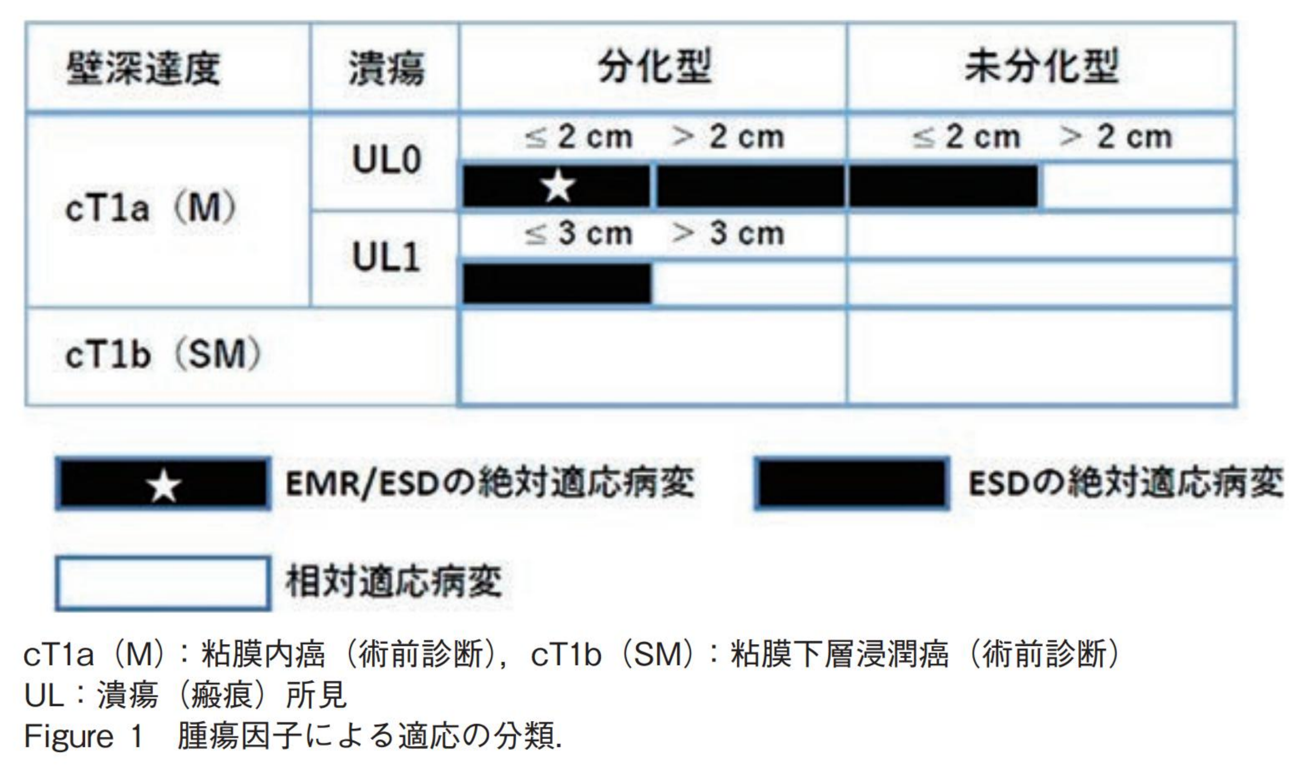
肛門側

口側


tub1
tub2
muc

肛門側

ESDの適応



壁深達度	潰瘍	分化型		未分化型	
cT1a（M）	UL0	≤ 2 cm	> 2 cm	≤ 2 cm	> 2 cm
		★	■	■	□
	UL1	≤ 3 cm	> 3 cm		
		■	□	□	
cT1b（SM）		□		□	

★ EMR/ESDの絶対適応病変　■ ESDの絶対適応病変

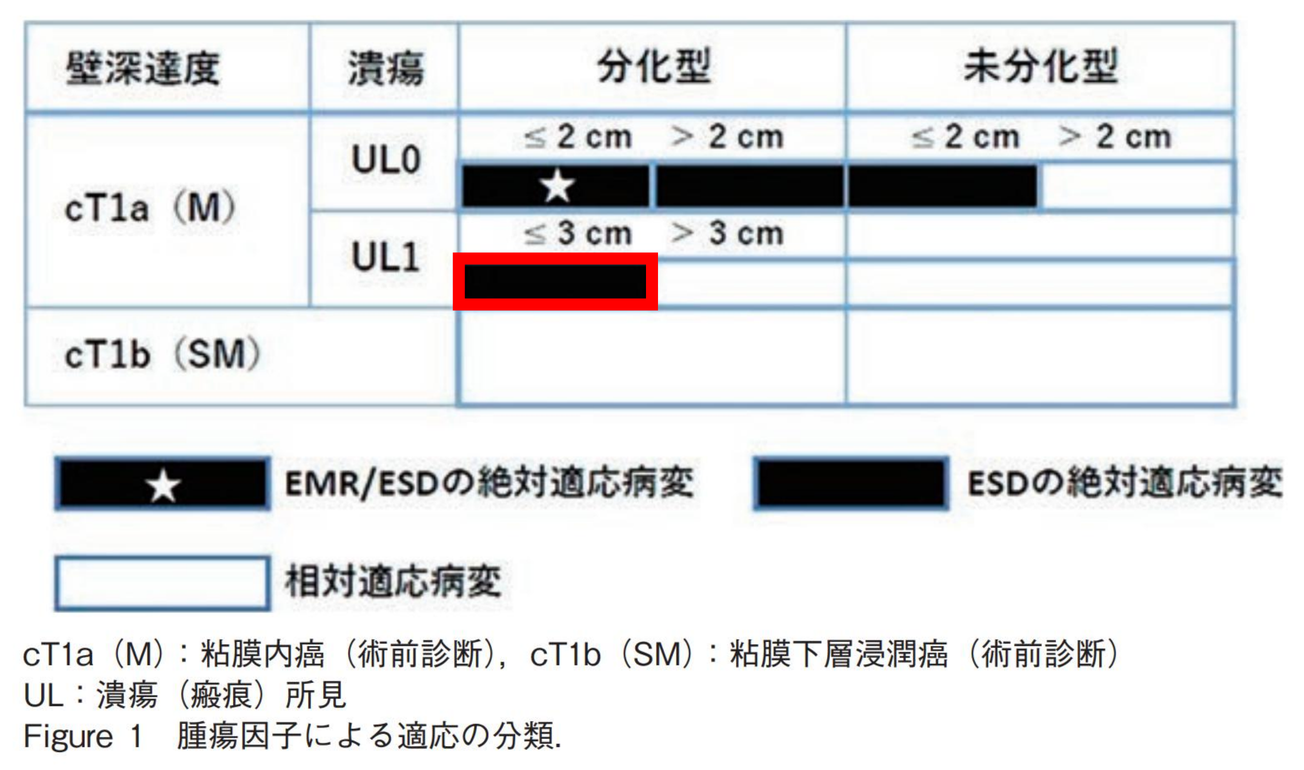
□ 相対適応病変

cT1a（M）：粘膜内癌（術前診断），cT1b（SM）：粘膜下層浸潤癌（術前診断）
UL：潰瘍（瘢痕）所見
Figure 1　腫瘍因子による適応の分類.

胃癌に対するESD/EMRガイドライン（第2版）

① UL0, cT1a, 分化型癌
② UL0, cT1a, 未分化癌
③ 3cm以下, UL1, cT1a, 分化型癌

ESDの適応



壁深達度	潰瘍	分化型		未分化型	
		≤2 cm	＞2 cm	≤2 cm	＞2 cm
cT1a（M）	UL0	■★	■	■	□
	UL1	≤3 cm	＞3 cm		
		■	□	□	
cT1b（SM）		□		□	

■★ EMR/ESDの絶対適応病変　■ ESDの絶対適応病変

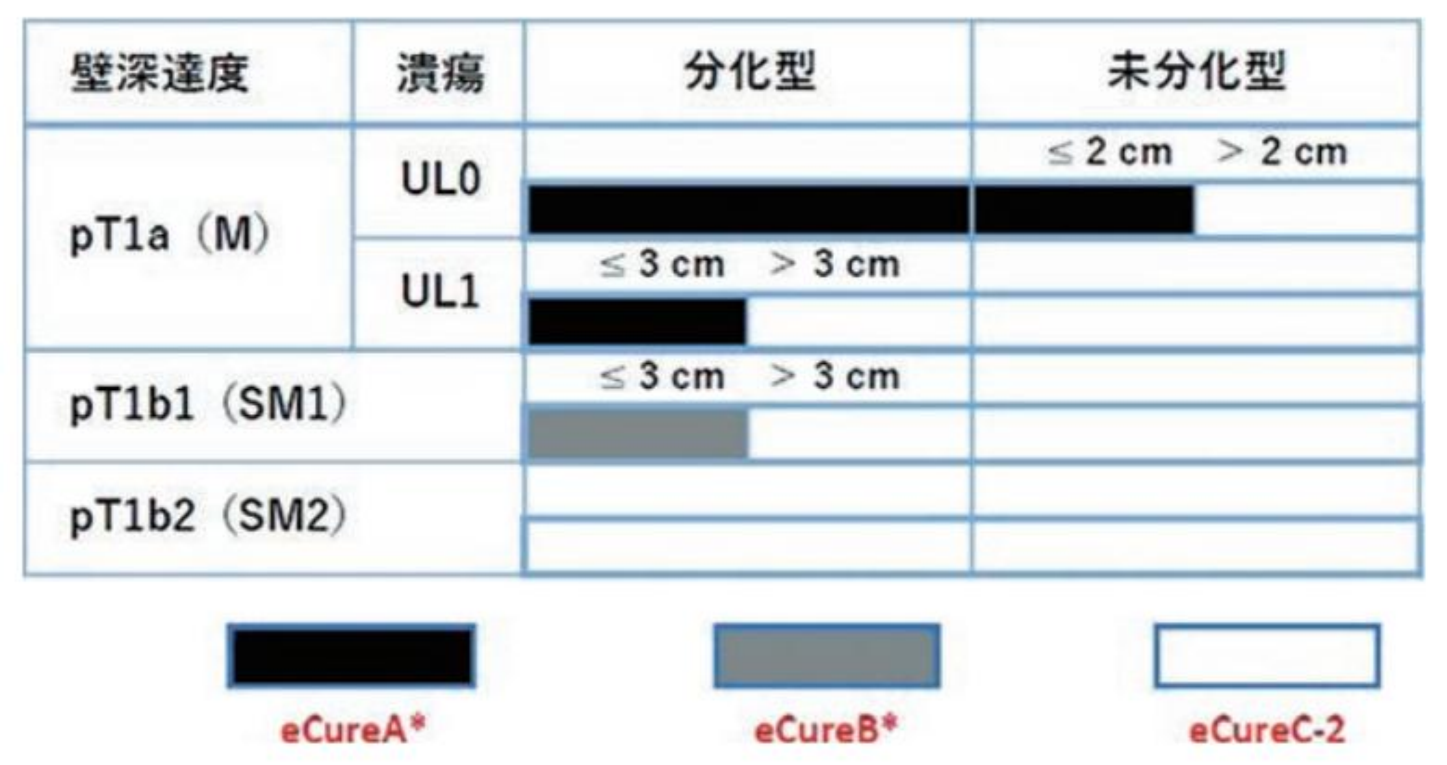
□ 相対適応病変

cT1a（M）：粘膜内癌（術前診断），cT1b（SM）：粘膜下層浸潤癌（術前診断）
UL：潰瘍（瘢痕）所見
Figure 1　腫瘍因子による適応の分類.

胃癌に対するESD/EMRガイドライン（第2版）

① UL0, cT1a, 分化型癌
② UL0, cT1a, 未分化癌
③ 3cm以下, UL1, cT1a, 分化型癌

内視鏡的根治度(eCura)



壁深達度	潰瘍	分化型	未分化型
pT1a（M）	UL0	■	≦ 2 cm ■ ＞ 2 cm □
	UL1	≦ 3 cm ■ ＞ 3 cm □	□
pT1b1（SM1）		≦ 3 cm ▨ ＞ 3 cm □	□
pT1b2（SM2）		□	□

■ eCureA*　▨ eCureB*　□ eCureC-2

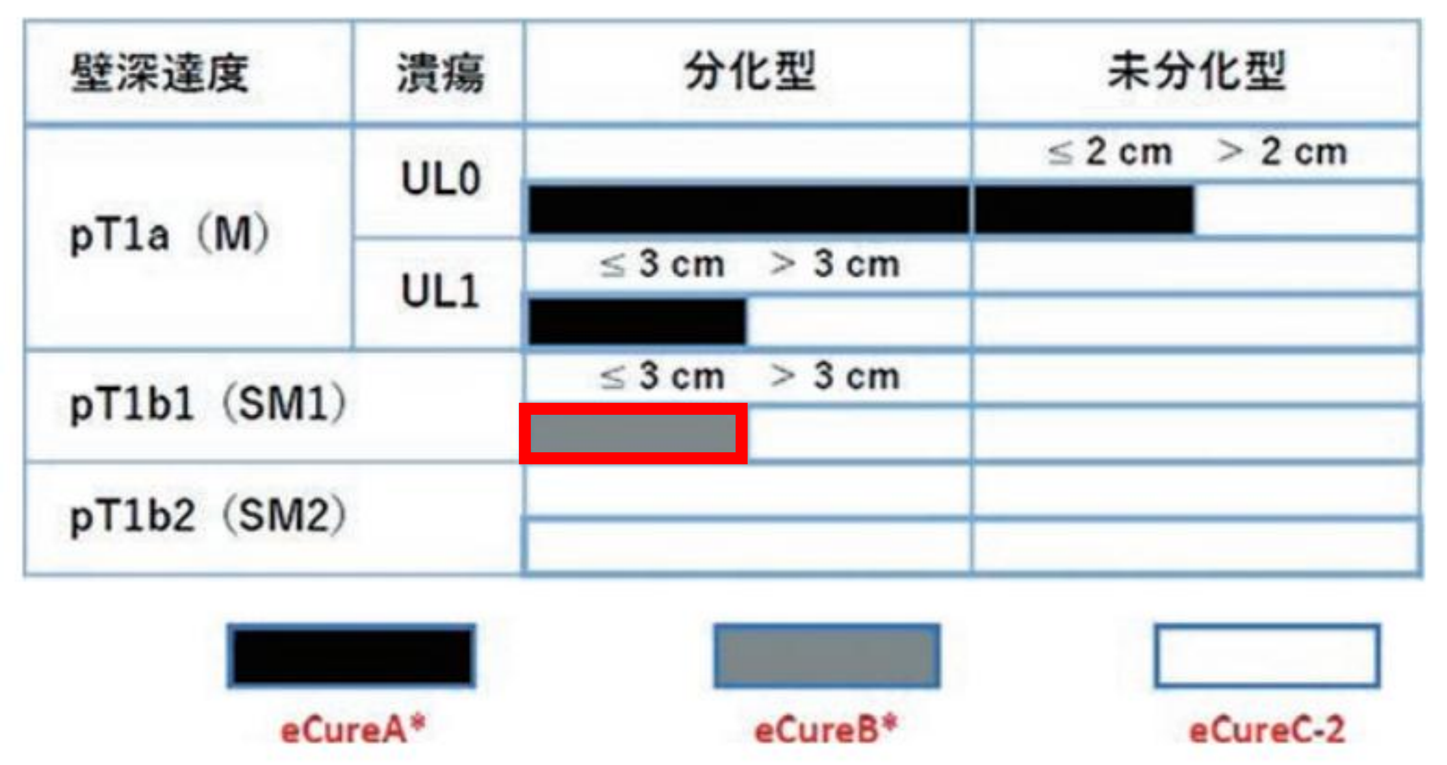
胃癌に対するESD/EMRガイドライン（第2版）

eCuraA：絶対適応病変で、HM0,VM0,Ly0,V0

eCuraB：3cm以下の分化型癌、SM1

eCureC：それ以外（非治癒切除）

内視鏡的根治度(eCura)



壁深達度	潰瘍	分化型	未分化型
pT1a（M）	UL0	■	≤ 2 cm ■ > 2 cm □
	UL1	≤ 3 cm ■ > 3 cm □	□
pT1b1（SM1）		≤ 3 cm ▨ > 3 cm □	□
pT1b2（SM2）		□	□

■ eCureA*

▨ eCureB*

□ eCureC-2

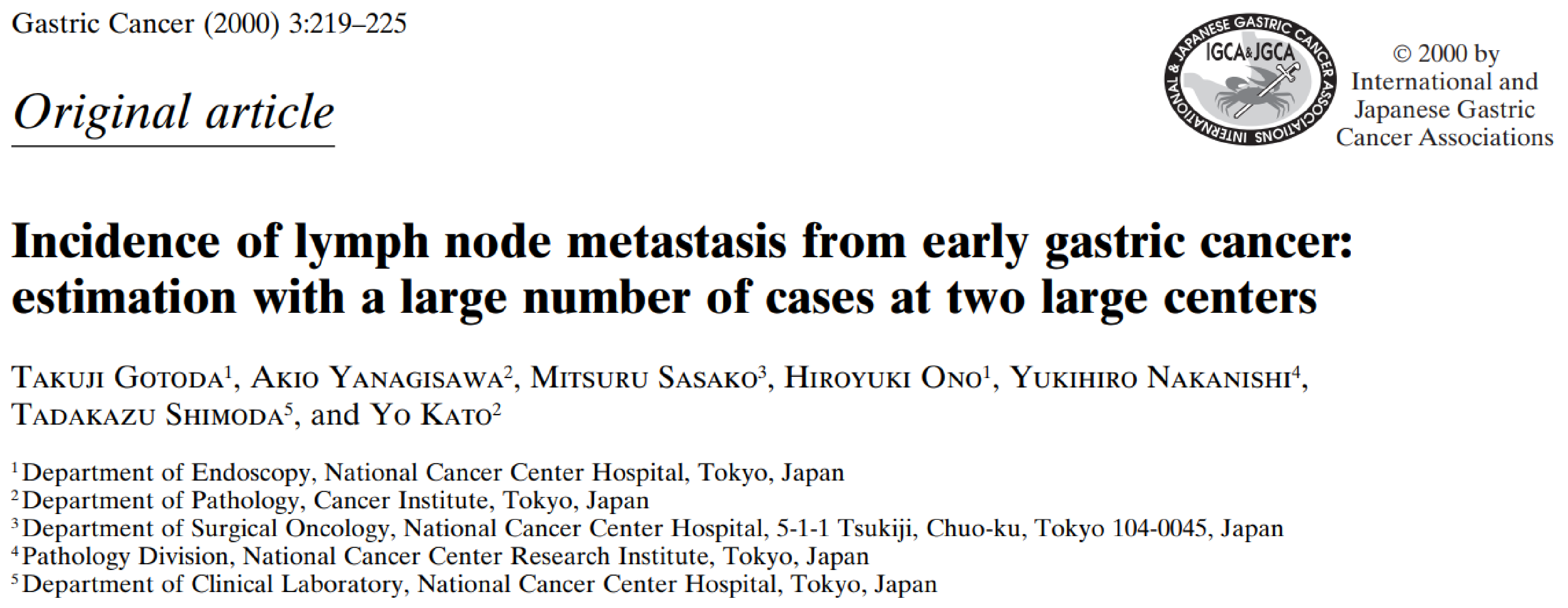
胃癌に対するESD/EMRガイドライン（第2版）

eCuraA：絶対適応病変で、HM0,VM0,Ly0,V0

eCuraB：3cm以下の分化型癌、SM1

eCureC：それ以外（非治癒切除）

eCuraBについて



Gastric Cancer (2000) 3:219–225

Original article

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International and
Japanese Gastric
Cancer Associations

Incidence of lymph node metastasis from early gastric cancer: estimation with a large number of cases at two large centers

Takuji Gotoda[1], Akio Yanagisawa[2], Mitsuru Sasako[3], Hiroyuki Ono[1], Yukihiro Nakanishi[4], Tadakazu Shimoda[5], and Yo Kato[2]

[1] Department of Endoscopy, National Cancer Center Hospital, Tokyo, Japan
[2] Department of Pathology, Cancer Institute, Tokyo, Japan
[3] Department of Surgical Oncology, National Cancer Center Hospital, 5-1-1 Tsukiji, Chuo-ku, Tokyo 104-0045, Japan
[4] Pathology Division, National Cancer Center Research Institute, Tokyo, Japan
[5] Department of Clinical Laboratory, National Cancer Center Hospital, Tokyo, Japan

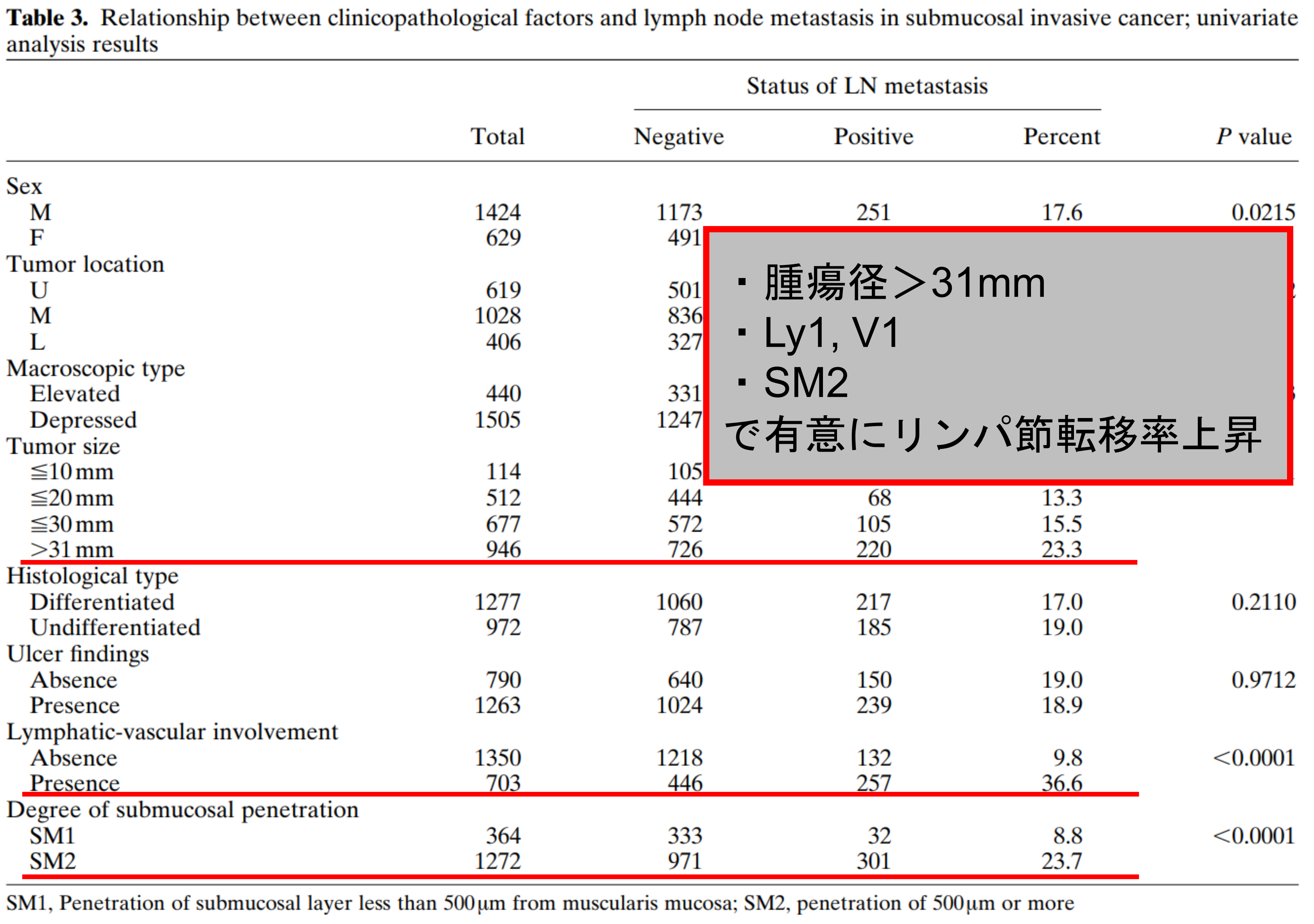
- 胃切除術を施行された5265例
  - M癌：3016例（リンパ節転移65例）
  - SM癌：2249例（リンパ節転移402例）

に対して、リンパ節転移（LNM）のリスク因子を検討

Table 3. Relationship between clinicopathological factors and lymph node metastasis in submucosal invasive cancer; univariate analysis results

		Status of LN metastasis			
	Total	Negative	Positive	Percent	*P* value
Sex					
M	1424	1173	251	17.6	0.0215
F	629	491	138	21.9	
Tumor location					
U	619	501	118	19.1	0.9402
M	1028	836	192	18.7	
L	406	327	79	19.5	
Macroscopic type					
Elevated	440	331	109	24.8	0.0003
Depressed	1505	1247	258	17.1	
Tumor size					
≦10 mm	114	105	9	7.9	<0.0001
≦20 mm	512	444	68	13.3	
≦30 mm	677	572	105	15.5	
>31 mm	946	726	220	23.3	
Histological type					
Differentiated	1277	1060	217	17.0	0.2110
Undifferentiated	972	787	185	19.0	
Ulcer findings					
Absence	790	640	150	19.0	0.9712
Presence	1263	1024	239	18.9	
Lymphatic-vascular involvement					
Absence	1350	1218	132	9.8	<0.0001
Presence	703	446	257	36.6	
Degree of submucosal penetration					
SM1	364	333	32	8.8	<0.0001
SM2	1272	971	301	23.7	

SM1, Penetration of submucosal layer less than 500 μm from muscularis mucosa; SM2, penetration of 500 μm or more



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	Total	Status of LN metastasis			*P* value
		Negative	Positive	Percent	
Sex					
M	1424	1173	251	17.6	0.0215
F	629	491	[illegible]	[illegible]	
Tumor location					
U	619	501	[illegible]	[illegible]	[illegible]
M	1028	836	[illegible]	[illegible]	
L	406	327	[illegible]	[illegible]	
Macroscopic type					
Elevated	440	331	[illegible]	[illegible]	[illegible]
Depressed	1505	1247	[illegible]	[illegible]	
Tumor size					
≦10 mm	114	105	[illegible]	[illegible]	[illegible]
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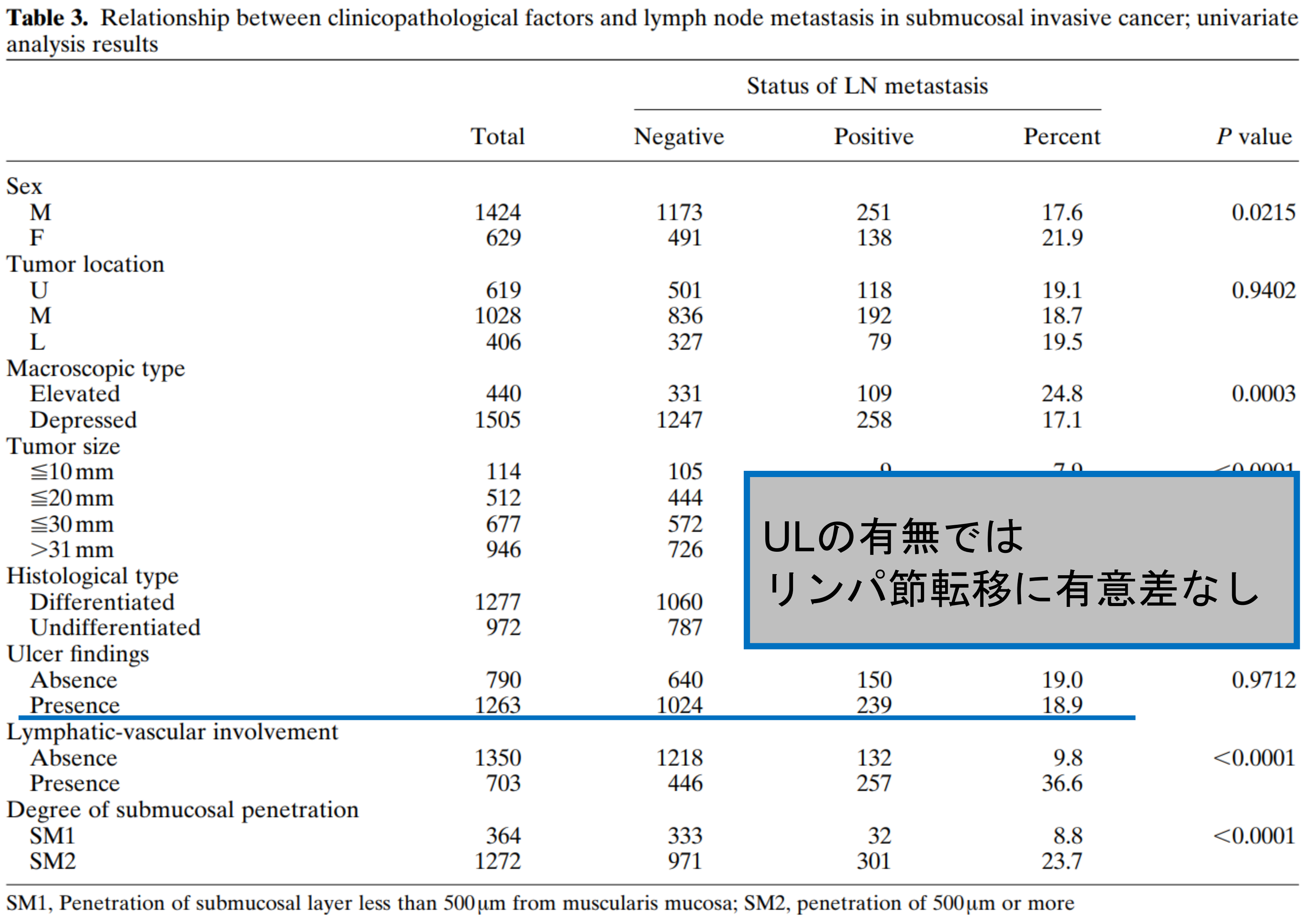
・腫瘍径＞31mm
・Ly1, V1
・SM2
で有意にリンパ節転移率上昇



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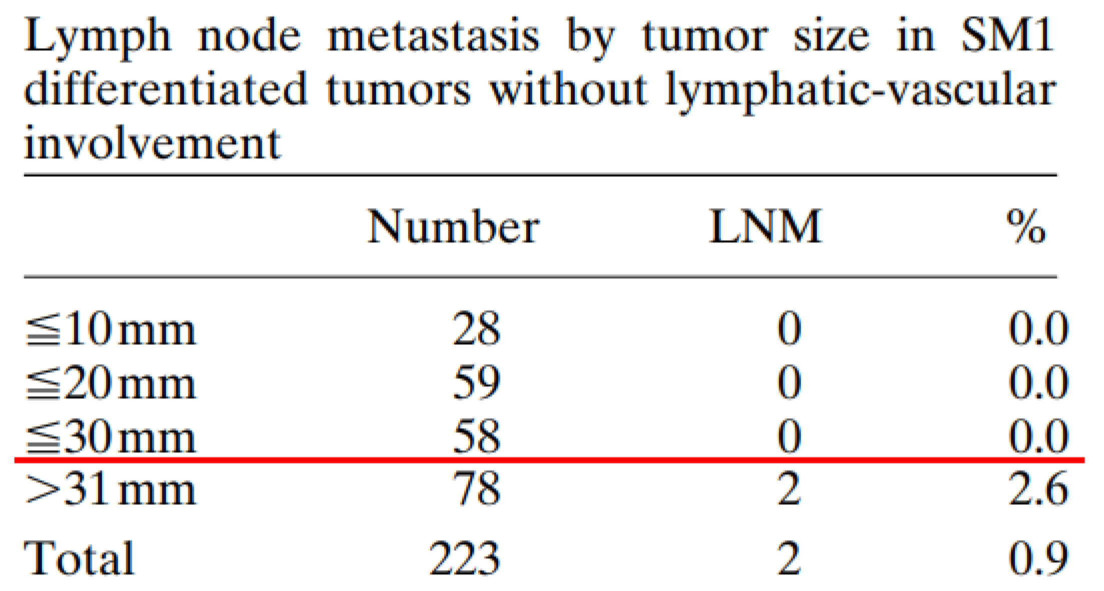
SM1, Penetration of submucosal layer less than 500 μm from muscularis mucosa; SM2, penetration of 500 μm or more

ULの有無では
リンパ節転移に有意差なし

- SM浸潤癌で、リンパ節転移の確率が高いもの

    - 腫瘍径＞30mm
    - Ly1
    - V1
    - SM2

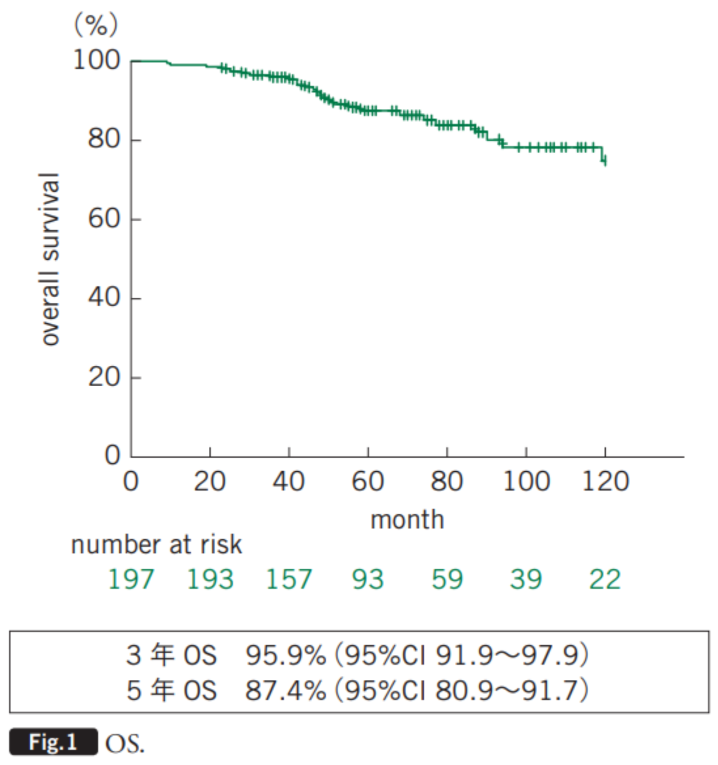
- ULの有無ではリンパ節転移に有意差なし



Lymph node metastasis by tumor size in SM1 differentiated tumors without lymphatic-vascular involvement

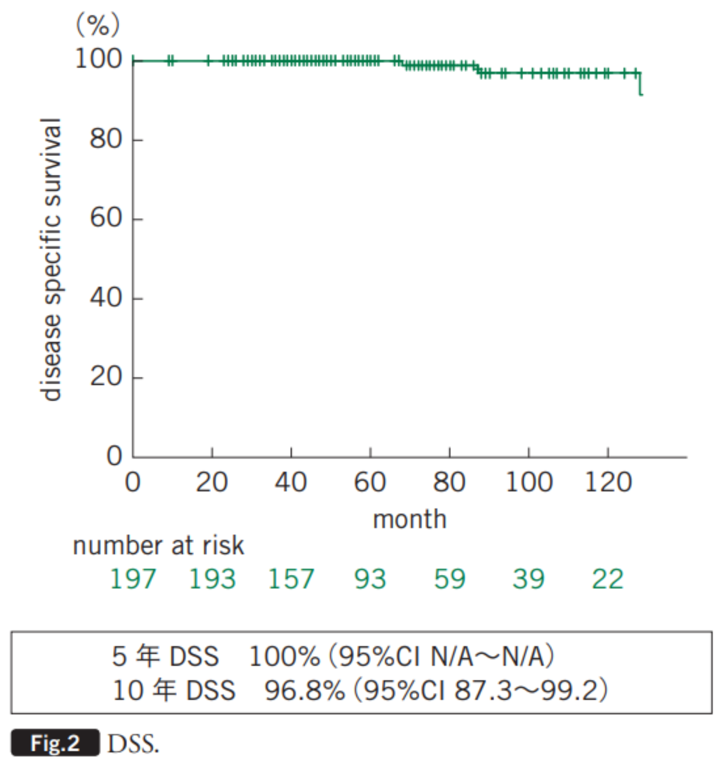
	Number	LNM	%
≦10mm	28	0	0.0
≦20mm	59	0	0.0
≦30mm	58	0	0.0
>31mm	78	2	2.6
Total	223	2	0.9

- SM1, ly0, v0で腫瘍径≦30mmであれば、リンパ節転移は0%



3 年 OS　95.9% (95%CI 91.9～97.9)
5 年 OS　87.4% (95%CI 80.9～91.7)

Fig.1 OS.



5 年 DSS　100% (95%CI N/A～N/A)
10 年 DSS　96.8% (95%CI 87.3～99.2)

Fig.2 DSS.

eCuraB症例における
5年全生存率 87.4%, 10年疾患特異的生存率 96.8%

胃癌再発2例、異時多発による死亡2例

胃と腸　56（1）：81-88, 2021

Clinical Gastroenterology and Hepatology 2023;21:307–318

STOMACH

Long-term Survival After Endoscopic Resection For Gastric Cancer: Real-world Evidence From a Multicenter Prospective Cohort

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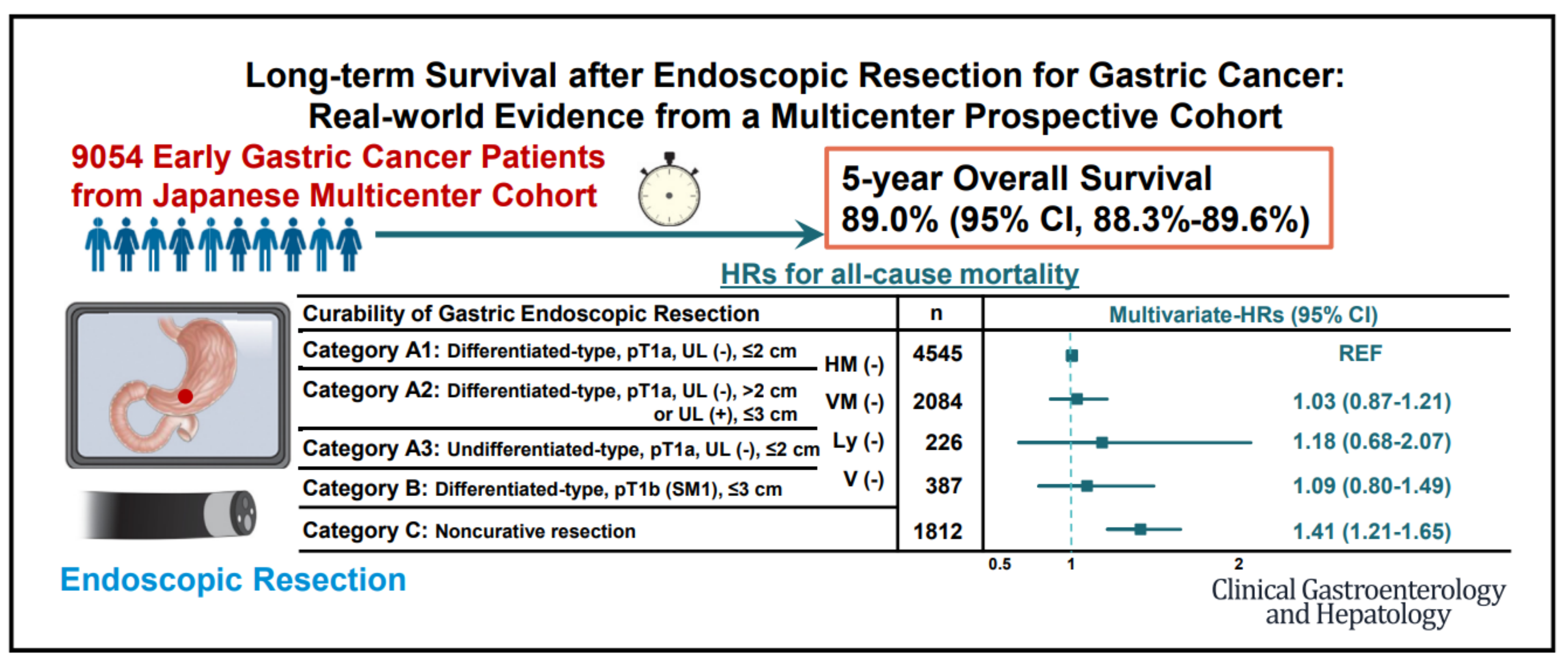
J-WEB/EGC

- 早期胃癌に対する内視鏡治療9054症例
- 全国多施設での前向きコホート研究

- 5年全生存率, 5年疾患特異的生存率を調査



Long-term Survival after Endoscopic Resection for Gastric Cancer: Real-world Evidence from a Multicenter Prospective Cohort

9054 Early Gastric Cancer Patients from Japanese Multicenter Cohort

5-year Overall Survival
89.0% (95% CI, 88.3%-89.6%)

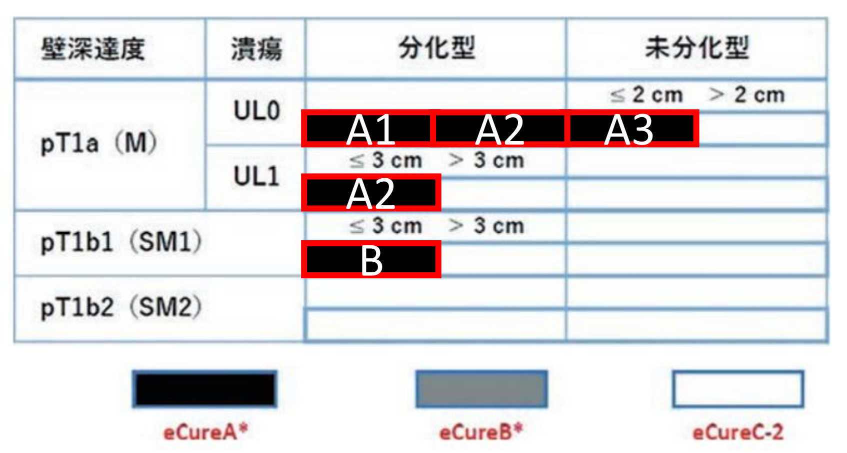
HRs for all-cause mortality

Curability of Gastric Endoscopic Resection		n	Multivariate-HRs (95% CI)
Category A1: Differentiated-type, pT1a, UL (-), ≤2 cm	HM (-) VM (-) Ly (-) V (-)	4545	REF
Category A2: Differentiated-type, pT1a, UL (-), >2 cm or UL (+), ≤3 cm		2084	1.03 (0.87-1.21)
Category A3: Undifferentiated-type, pT1a, UL (-), ≤2 cm		226	1.18 (0.68-2.07)
Category B: Differentiated-type, pT1b (SM1), ≤3 cm		387	1.09 (0.80-1.49)
Category C: Noncurative resection		1812	1.41 (1.21-1.65)

Endoscopic Resection

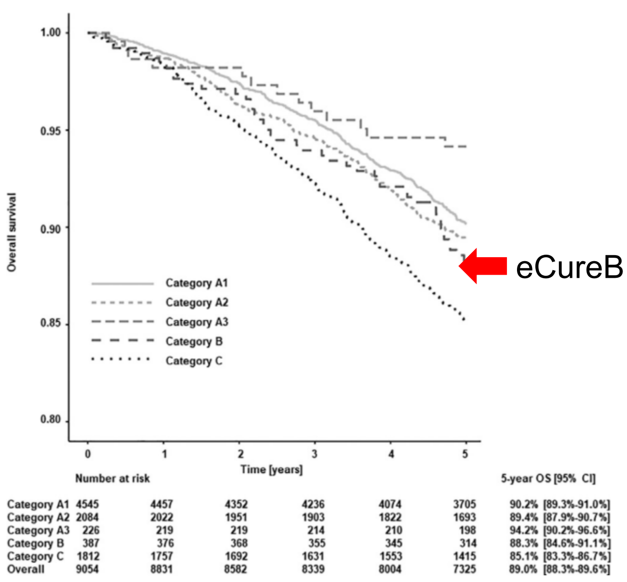
Clinical Gastroenterology and Hepatology

- 内視鏡的根治度ごとの5年生存率を比較



壁深達度	潰瘍	分化型		未分化型	
				≤ 2 cm	> 2 cm
pT1a（M）	UL0	A1	A2	A3	
		≤ 3 cm	> 3 cm		
	UL1	A2			
pT1b1（SM1）		≤ 3 cm	> 3 cm		
		B			
pT1b2（SM2）					

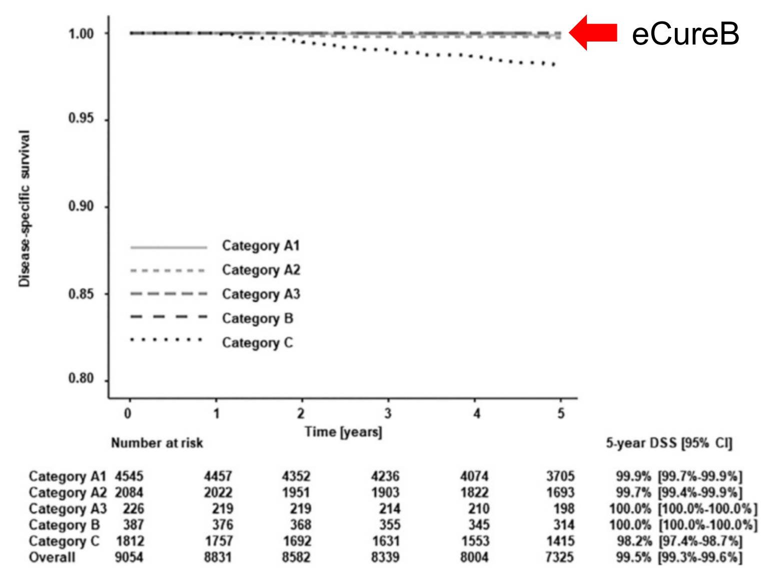
■ eCureA*
▨ eCureB*
□ eCureC-2



eCureB

Number at risk							5-year OS [95% CI]
Category A1	4545	4457	4352	4236	4074	3705	90.2% [89.3%-91.0%]
Category A2	2084	2022	1951	1903	1822	1693	89.4% [87.9%-90.7%]
Category A3	226	219	219	214	210	198	94.2% [90.2%-96.6%]
Category B	387	376	368	355	345	314	88.3% [84.6%-91.1%]
Category C	1812	1757	1692	1631	1553	1415	85.1% [83.3%-86.7%]
Overall	9054	8831	8582	8339	8004	7325	89.0% [88.3%-89.6%]

Figure 2. Overall survival curve.



eCureB

Number at risk							5-year DSS [95% CI]
Category A1	4545	4457	4352	4236	4074	3705	99.9% [99.7%-99.9%]
Category A2	2084	2022	1951	1903	1822	1693	99.7% [99.4%-99.9%]
Category A3	226	219	219	214	210	198	100.0% [100.0%-100.0%]
Category B	387	376	368	355	345	314	100.0% [100.0%-100.0%]
Category C	1812	1757	1692	1631	1553	1415	98.2% [97.4%-98.7%]
Overall	9054	8831	8582	8339	8004	7325	99.5% [99.3%-99.6%]

Supplementary Figure 1. DSS curve.

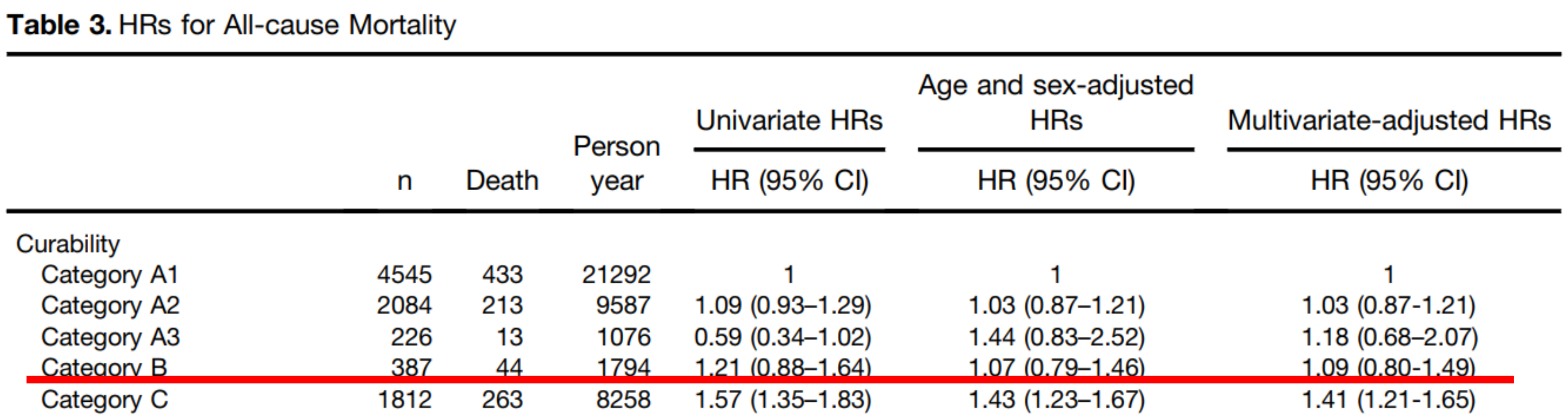


Table 3. HRs for All-cause Mortality

				Univariate HRs	Age and sex-adjusted HRs	Multivariate-adjusted HRs
	n	Death	Person year	HR (95% CI)	HR (95% CI)	HR (95% CI)
Curability						
Category A1	4545	433	21292	1	1	1
Category A2	2084	213	9587	1.09 (0.93–1.29)	1.03 (0.87–1.21)	1.03 (0.87-1.21)
Category A3	226	13	1076	0.59 (0.34–1.02)	1.44 (0.83–2.52)	1.18 (0.68–2.07)
Category B	387	44	1794	1.21 (0.88–1.64)	1.07 (0.79–1.46)	1.09 (0.80-1.49)
Category C	1812	263	8258	1.57 (1.35–1.83)	1.43 (1.23–1.67)	1.41 (1.21-1.65)

- 全死因死亡率のHRは、eCureA,Bで有意差なし

まとめ

- eCuraBにおいても、eCuraAと同等のリンパ節転移率、長期予後が期待できる。