図 1. 糖尿病マーカーと胃がんとの関連

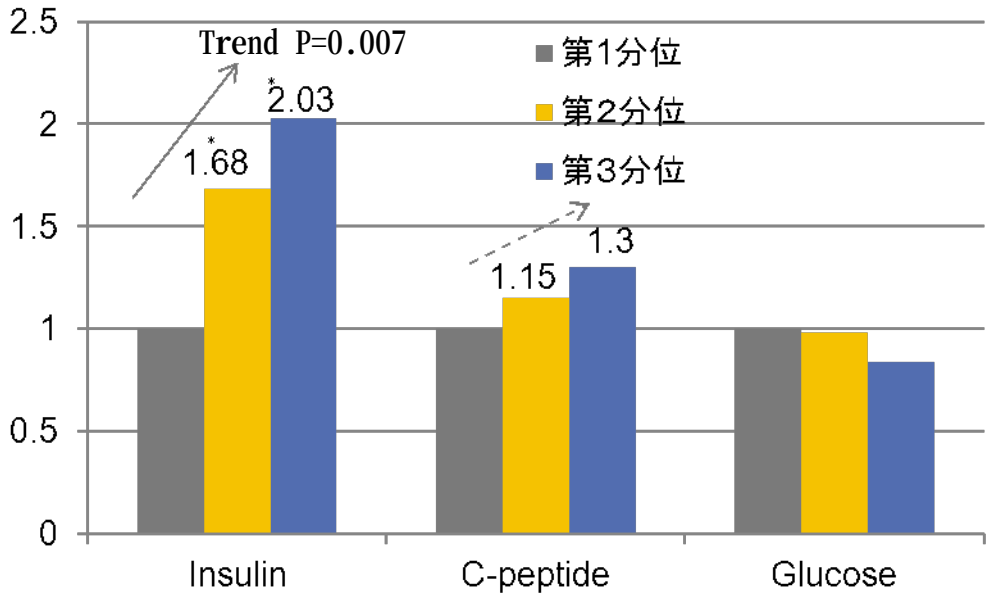

図2. ALDH2 遺伝子多型と飲酒量（週当たり 0-149.9/ 150g 以上）と胃がんとの関連-交互作用-

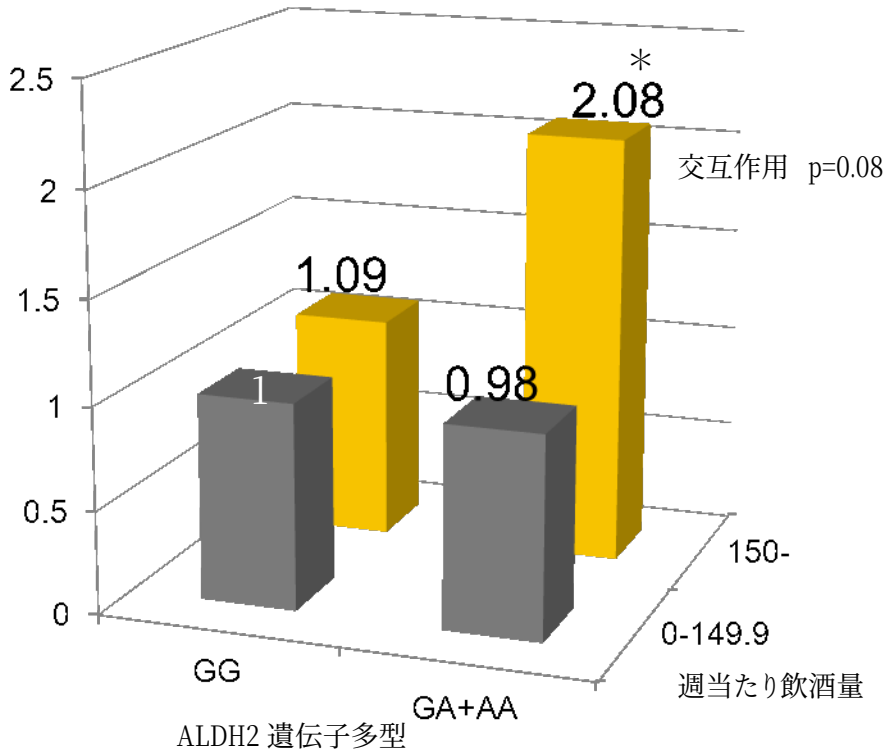

図 3. CYP1A1 遺伝子多型と喫煙と胃がんとの関連-交互作用-

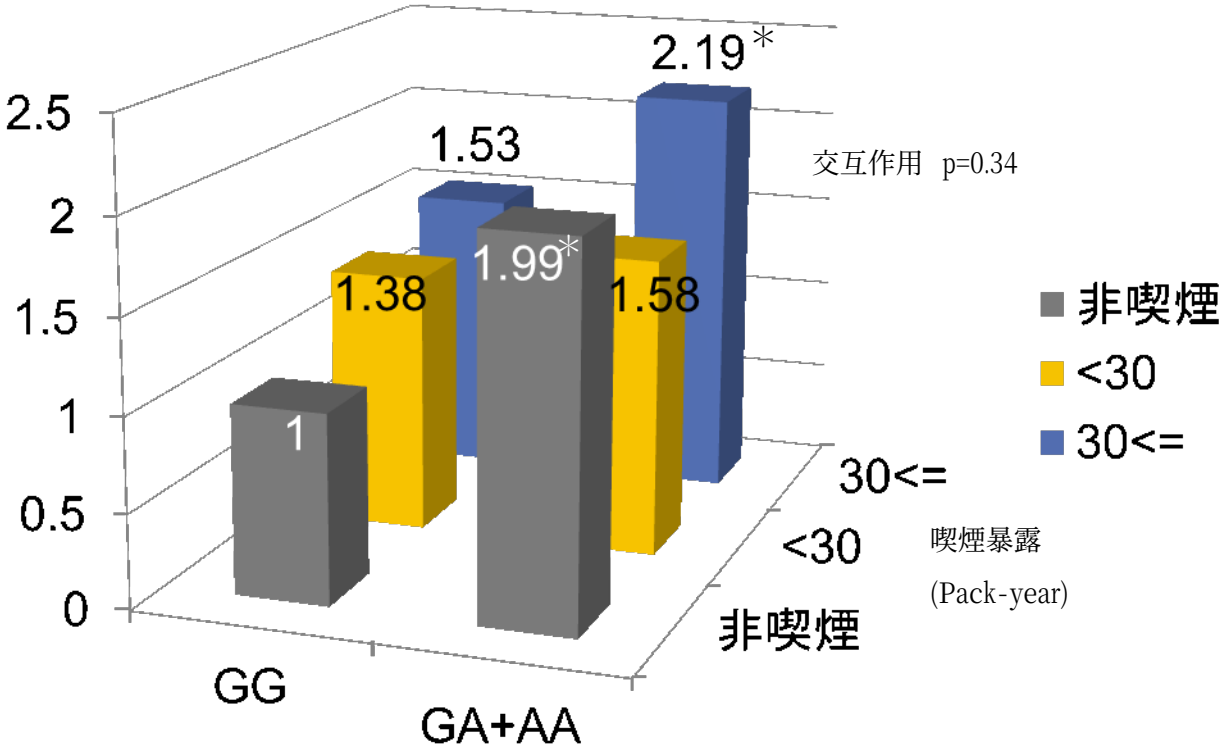

表 1. H.p 感染と萎縮性胃炎の有無の組み合わせと胃がん罹患率（10 万人年あたり）（男性）

男性	**萎縮無**	**萎縮あり**
HP **感染陰性**	**31.61 [14.45, 60.01]** **症例数**: 9 **人年**: 28472.0	**388.36 [217.36, 640.55]** **症例数**: 15 **人年**: 3862.4
HP **感染陽性**	**167.01 [127.13, 215.43]** **症例数**: 59 **人年**: 35327.5	**455.30 [392.54, 525.24]** **症例数**: 188 **人年**: 41291.3

表 2. H.p 感染と萎縮性胃炎の有無の組み合わせと胃がん罹患率（10 万人年あたり）（女性）

女性	**萎縮無**	**萎縮あり**
HP **感染陰性**	**15.90 [7.62,29.23]** **症例数**: 10 **人年**: 62912.6	**194.61 [97.15,348.21]** **症例数**: 11 **人年**: 5652.3
HP **感染陽性**	**85.52 [63.48,112.75]** **症例数**: 50 **人年**: 58465.4	**125.91 [102.66,152.84]** **症例数**: 102 **人年**: 81013.1

表3．対象者の特性

		胃がん		非がん対照	
Overall	**697**	**%**	**1,372**	**%**	
性	男性	521	74.7	1,028	74.9
	女性	176	25.3	344	25.1
年齢	<40	34	4.9	146	10.6
	40-49	72	10.3	154	11.2
	50-59	245	35.2	429	31.3
	60-69	210	30.1	435	31.7
	>70	136	19.5	208	15.2
喫煙	非喫煙	222	31.9	538	39.2
	過去喫煙	181	26	403	29.4
	現在喫煙	294	42.2	430	31.3
Pack-years					
	非喫煙	222	31.9	539	39.3
	<20	99	14.2	286	20.9
	<40	160	23.0	272	19.8
	<60	117	16.8	153	11.2
	60 or more	92	13.2	113	8.2
飲酒	非飲酒	228	32.7	452	32.9
	軽度飲酒	167	24.0	412	30.0
	中等度飲酒	159	22.8	316	23.0
	高度飲酒	132	18.9	177	12.9
野菜・果物摂取3分位					
最低(<114.0 g/day)		263	37.7	446	32.5
中等(<199.96 g/day)		208	29.8	445	32.4
最高(≥199.96 g/day)		209	30	445	32.4
胃がんの家族歴					
	有り	153	22	239	17.4
	無し	544	78	1133	82.6
Helicobacter pylori IgG抗体検査					
	陽性	124	17.8	628	45.8
	陰性	573	82.2	744	54.2
ペプシノーゲンによる慢性胃炎の有無					
	陰性	262	37.6	893	128.1
	陽性	434	62.3	479	68.7
	不詳	1	0.1	0	0

表4．飲酒と ALDH2 遺伝子型と胃がんリスクの関連

			モデル 1*1	モデル 2 *2	モデル 3 *3
	Case	**Control**	**OR(95%CI)*2**	**OR(95%CI)*2**	**OR(95%CI)*2**
飲酒状況					
非飲酒	228	452	Reference	Reference	Reference
軽度飲酒	167	412	0.81 (0.63-1.04)	0.89 (0.67-1.17)	1.04 (0.77-1.40)
中等度飲酒	159	316	1.03 (0.79-1.34)	0.92 (0.68-1.24)	1.15 (0.82-1.61)
高度飲酒	132	177	1.52 (1.14-2.04)	1.29 (0.92-1.80)	1.72 (1.17-2.52)
不詳	11	15			
ALDH2 遺伝子型 ***4**					
Glu/Glu	310	683	Reference	Reference	Reference
Lys+	386	689	1.24 (1.03-1.49)	1.27 (1.04-1.56)	1.42 (1.13-1.79)
Glu/Lys	323	580	1.23 (1.02-1.49)	1.25 (1.01-1.54)	1.40 (1.11-1.76)
Lys/Lys	63	109	1.27 (0.91-1.78)	1.42 (0.98-2.08)	1.73 (1.12-2.68)

*1 Crude ORs by the conditional logistic regression model.

*2 ORs were calculated by a conditional logistic regression model adjusted for pack-years of smoking, fruit and vegetable intake, family history of gastric cancer, gastric atrophy defined by serological pepsinogen testing, and ***Helicobacter pylori*** status.

*3 ORs were calculated by unconditional logistic regression model adjusted for age, sex, pack-years of smoking, fruit and vegetable intake, family history of gastric cancer, gastric atrophy defined by serological pepsinogen testing, ***Helicobacter pylori*** status, levels of drinking, and ALDH2 genotypes.

*4 One case was excluded because ALDH2 genotype was not defined.

表5．胃がんリスクと飲酒･ALDH2 遺伝子型の組合わせの関連

	ALDH2 Glu/Glu			ALDH2 Lys+			
飲酒状況	症例	対照	OR(95%CI)*2	症例	対照	OR(95%CI)*2	交互作用 P
非飲酒	49	112	Reference	179	340	1.24 (0.82-1.90)	0.0054
軽度飲酒	87	208	1.07 (0.67-1.70)	80	204	1.03 (0.63-1.67)	
中等度飲酒	79	208	0.89 (0.54-1.44)	80	108	1.57 (0.94-2.64)	
高度飲酒	87	145	1.28 (0.77-2.12)	44	32	3.03 (1.59-5.79)	
不詳	8	10		3	5		

*1 One case was excluded because ALDH2 genotype was not defined.

*2 ORs were calculated by an unconditional logistic regression model adjusted for age, sex, pack-years of smoking, fruit and vegetable intake, family history of gastric cancer, gastric atropy defined by serological pepsinogen testing, and *Helicobacter pylori* status.

表6．**非がん対照者における ALDH2 遺伝子型と飲酒量の組合わせと、萎縮性胃炎の関連**

	Overall			**Combined with ALDH2 genotype**					
				ALDH2 Glu/Glu			**ALDH2 Lys+**		
	AG	**non-AG**	**OR(95%CI)*2**	**AG**	**non-AG**	**OR(95%CI)*2**	**AG**	**non-AG**	**OR(95%CI)*2**
非飲酒	163	289	Reference	39	73	Reference	124	216	1.65 (0.92-2.93)
軽度飲酒	128	284	0.99 (0.68-1.44)	68	140	1.71 (0.90-3.25)	60	144	1.27 (0.66-2.44)
中等度飲酒	119	197	1.20 (0.81-1.79)	76	132	1.67 (0.88-3.17)	43	65	2.10 (1.00-4.41)
高度飲酒	66	111	1.19 (0.73-1.92)	51	94	1.48 (0.74-2.98)	15	17	4.50 (1.51-13.43)
不詳	3	12		1	9		2	3	

*1 One case was excluded because ALDH2 genotype was not defined.

*2 ORs were calculated by an unconditional logistic regression model adjusted for age, sex, pack-years of smoking, fruit and vegetable intake, family history of gastric cancer, and *Helicobacter pylori* status

表7. ピロリ菌感染と背景要因

	H. pylori 陰性 n=550	%	陽性 n=367	%
性				
男	266	48.4%	205	55.9%
女	284	51.6%	162	44.1%
年齢				
<=30	149	27.1%	29	7.9%
31-40	137	24.9%	33	9.0%
41-50	86	15.6%	63	17.2%
51-60	72	13.1%	105	28.6%
61-70	67	12.2%	94	25.6%
71-	39	7.1%	43	11.7%
喫煙				
PY<5	354	64.4%	206	56.1%
5 <= PY <20	92	16.7%	64	17.4%
20 <= PY <40	60	10.9%	43	11.7%
PY >=40	44	8.0%	54	14.7%

表8.萎縮性胃炎の有無と背景要因

	萎縮性胃炎 陰性 n=657	%	陽性 n=259	%
性				
男	346	52.7%	125	48.3%
女	311	47.3%	134	51.7%
年齢				
<=30	166	25.3%	12	4.6%
31-40	160	24.4%	10	3.9%
41-50	114	17.4%	35	13.5%
51-60	102	15.5%	75	29.0%
61-70	88	13.4%	73	28.2%
71-	27	4.1%	54	20.8%
喫煙				
PY<5	402	61.2%	157	60.6%
5 <= PY <20	118	18.0%	38	14.7%
20 <= PY <40	79	12.0%	24	9.3%
PY >=40	58	8.8%	40	15.4%

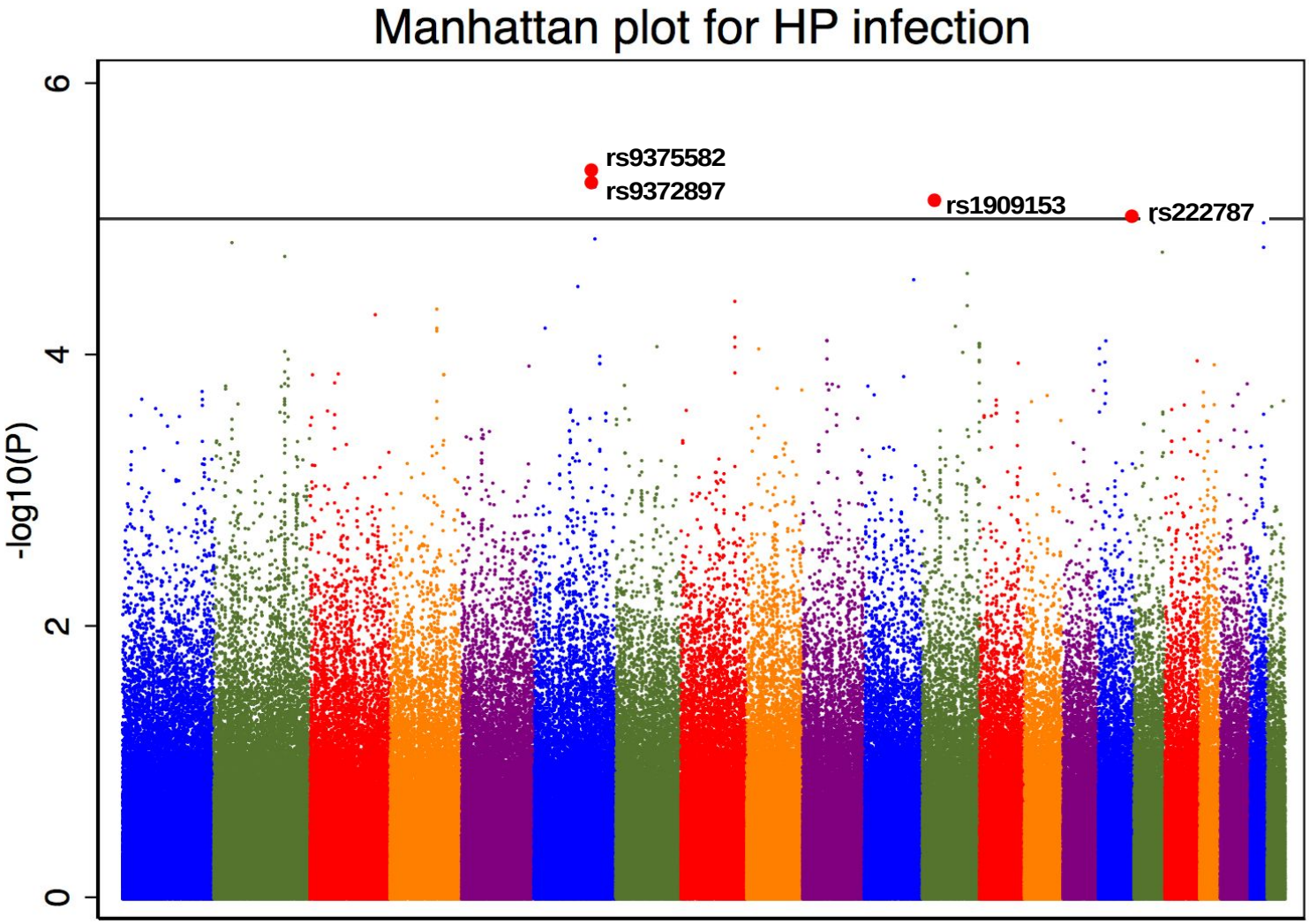

図 4. ピロリ菌感染に関するマンハッタンプロット

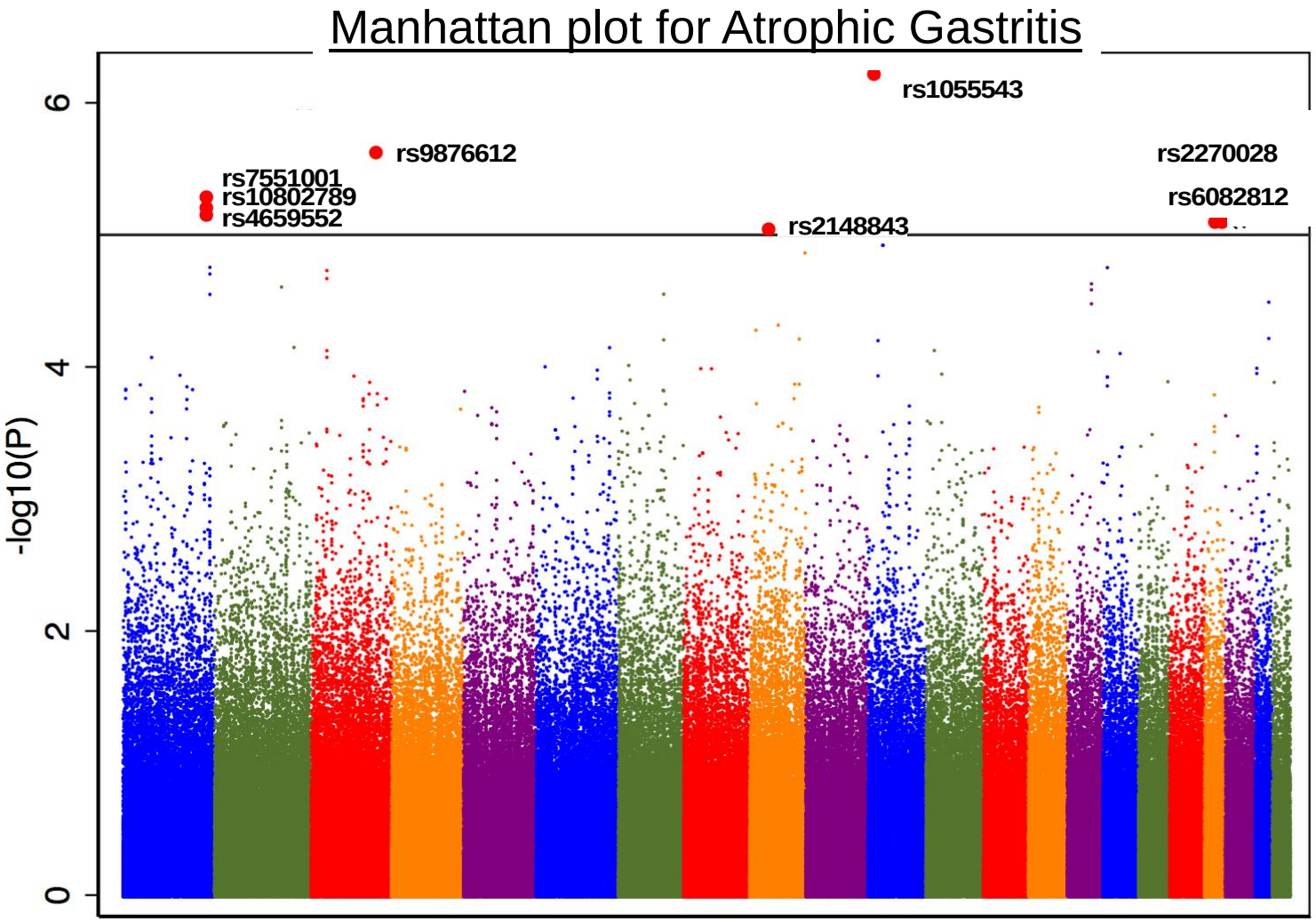

図 5.萎縮性胃炎に関するマンハッタンプロット