

SUPPLEMENTARY MATERIAL**Magahis, PT et al. Impact of *Helicobacter Pylori* Infection Status on Outcomes among Patients with Advanced Gastric Cancer Treated with Immune Checkpoint Inhibitors.**

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Table of Contents

Supplemental Table 1. Treatment characteristics and outcomes in patients with gastric cancer treated with immune-checkpoint inhibitors without concurrent chemotherapy by <i>H. pylori</i> status.....	3
Supplemental Table 2. Baseline characteristics of patients with gastric cancer treated with immune-checkpoint inhibitors by <i>H. pylori</i> infection timing.....	4
Supplemental Table 3. Progression-free survival (PFS) and overall survival (OS) in gastric cancer patients treated with immune-checkpoint inhibitors by treatment line.....	6
Supplemental Figure 1. Survival curve of progression-free survival (PFS) in patients with gastric cancer undergoing first-line immune checkpoint inhibitor (ICI) therapy with concurrent chemotherapy by <i>H. pylori</i> status.....	7
Supplemental Figure 2. Survival curves of patients with gastric cancer treated with immune-checkpoint inhibitors by <i>H. pylori</i> infection timing: A, Progression-free survival (PFS); B, Overall survival (OS).....	8

Supplemental Table 1. Treatment characteristics and outcomes in patients with gastric cancer treated with immune-checkpoint inhibitors without concurrent chemotherapy by *H. pylori* status

Characteristics	Total n=161	<i>H. pylori</i> negative n=124	<i>H. pylori</i> positive n=37	P-value
ICI Used, n (%)				0.80
Anti-PD-(L)1	123 (76)	96 (77)	27 (73)	
Anti-CTLA-4	5 (3)	4 (3)	1 (3)	
Combination	33 (21)	24 (20)	9 (24)	
Line of ICI Therapy, n (%)				0.51
1L	23 (14)	17 (13)	6 (16)	
2L	34 (21)	28 (23)	6 (16)	
3L	57 (36)	46 (37)	11 (30)	
≥4L	47 (29)	33 (27)	14 (39)	
Duration of ICI usage (months), median (IQR)	1.37 (0.70-4.90)	1.58 (0.70-5.98)	1.00 (0.67-4.53)	0.20
PPI within ≤30d of ICI start, n (%)				0.64
Yes	35 (22)	28 (23)	7 (19)	
No	126 (78)	96 (77)	30 (81)	
Primary surgery, n (%)				0.98
Yes	35 (22)	29 (22)	8 (22)	
No	126 (78)	97 (78)	29 (78)	

Supplemental Table 2. Baseline characteristics of patients with gastric cancer treated with immune-checkpoint inhibitors by *H. pylori* infection timing

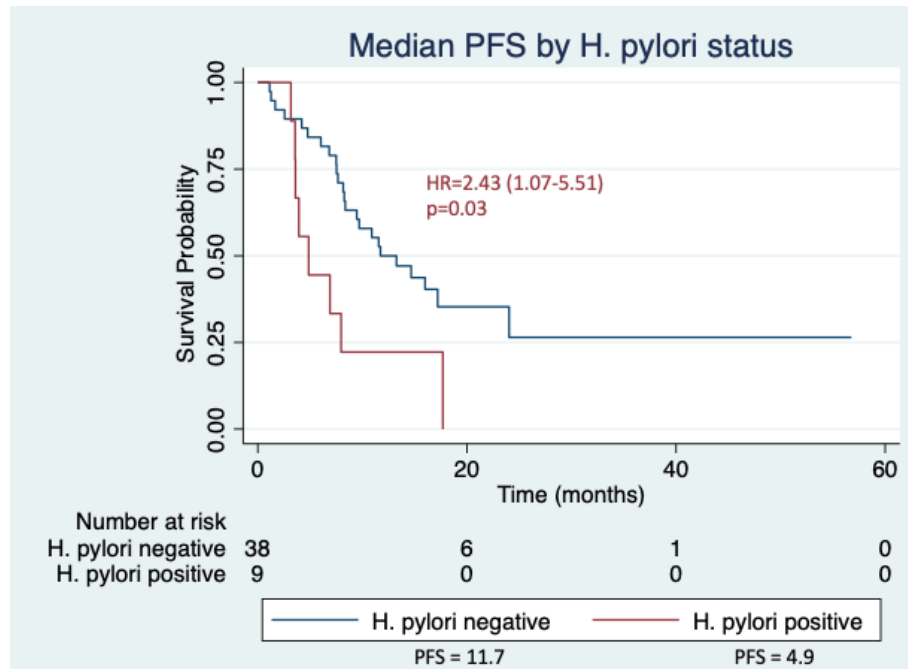
Characteristics	Total n=49	Prior <i>H. pylori</i> infection n=27	Active <i>H. pylori</i> infection n=22	P-value
Age at ICI initiation, mean (SD)	53.1 (16)	51.8 (16)	54.5 (16)	0.56
Sex, n (%)				0.99
Male	29 (59)	16 (59)	13 (59)	
Female	20 (41)	11 (41)	9 (41)	
Race, n (%)				0.63
White	30 (61)	16 (59)	14 (64)	
Black	5 (10)	3 (11)	2 (9)	
Asian	5 (10)	4 (15)	1 (5)	
Other/Unknown	9 (19)	4 (15)	5 (22)	
Ethnicity, n (%)				0.43
Non-Hispanic	37 (76)	21 (78)	16 (72)	
Hispanic	8 (16)	5 (18)	3 (14)	
Unknown	4 (8)	1 (4)	3 (14)	
ECOG PS, n (%)				0.06
0	24 (49)	12 (45)	12 (55)	
1	19 (39)	9 (33)	10 (46)	
≥2	6 (12)	6 (22)	0 (0)	
Family History of GC, n (%)				0.82
Yes	5 (10)	3 (11)	2 (9)	
No	44 (90)	24 (89)	20 (91)	
Cancer stage, n (%)				0.68
I/II	8 (16)	4 (15)	4 (18)	
III	3 (6)	1 (4)	2 (9)	
IV	38 (78)	22 (81)	16 (73)	
PD-L1 status, n (%)				0.30
Positive	15 (31)	6 (22)	9 (41)	
Negative	10 (20)	7 (26)	3 (14)	
Not examined	24 (49)	14 (52)	10 (45)	
HER2 status, n (%)				0.17
Positive	4 (8)	3 (11)	1 (5)	
Negative	42 (86)	21 (78)	21 (95)	
Not examined	3 (6)	3 (11)	0 (0)	
MMR status, n (%)				0.13
MSI-H	6 (12)	1 (4)	5 (23)	
MSS	36 (74)	22 (81)	14 (64)	
Not examined	7 (14)	4 (15)	3 (13)	
Primary tumor site, n (%)				0.92

Cardia	13 (26)	7 (26)	6 (27)	
Non-cardia	36 (74)	20 (74)	16 (73)	
Lauren classification, n (%)				0.98
Intestinal	40 (82)	22 (82)	18 (82)	
Diffuse	9 (18)	5 (18)	4 (18)	
Metastasis, n (%)				0.34
Yes	26 (53)	16 (59)	10 (45)	
No	23 (47)	11 (41)	12 (55)	
ICI Used, n (%)				0.53
Anti-PD-(L)1	39 (80)	22 (81)	17 (77)	
Anti-CTLA-4	1 (2)	1 (4)	0 (0)	
Combination	9 (18)	4 (15)	5 (23)	
Line of ICI Therapy, n (%)				0.25
1L	15 (31)	6 (22)	9 (41)	
2L	7 (14)	5 (19)	2 (9)	
3L	13 (26)	6 (22)	7 (32)	
≥4L	14 (29)	10 (37)	4 (18)	
Duration of ICI usage (months), median (IQR)	2.1 (0.7-4.9)	1.4 (0.7-3.7)	3.8 (0.2-5.8)	0.32
PPI within ≤30d of ICI start, n (%)				0.65
Yes	8 (16)	5 (19)	3 (14)	
No	41 (84)	22 (81)	19 (86)	
Concurrent chemotherapy, n (%)				0.80
Yes	12 (25)	7 (26)	5 (23)	
No	37 (75)	20 (74)	17 (77)	
Primary surgery, n (%)				0.52
Yes	11 (22)	7 (26)	4 (18)	
No	38 (78)	20 (74)	18 (82)	

Supplemental Table 3. Progression-free survival (PFS) and overall survival (OS) in gastric cancer patients treated with immune-checkpoint inhibitors by treatment line

Line of ICI Therapy	PFS			OS		
	Median (months)	HR (95% CI)	P-value	Median (months)	HR (95% CI)	P-value
1st line (n=70)			0.57			0.93
<i>H. pylori</i> negative	13.3	1 (reference)		23.7	1 (reference)	
<i>H. pylori</i> positive	6.9	1.23 (0.60-2.50)		25.4	0.93 (0.45-1.97)	
2nd line (n=38)			0.02			0.15
<i>H. pylori</i> negative	4.3	1 (reference)		17.0	1 (reference)	
<i>H. pylori</i> positive	2.0	2.93 (1.21-7.10)		15.3	1.89 (0.80-4.51)	
3rd line (n= 60)			<0.01			0.04
<i>H. pylori</i> negative	4.3	1 (reference)		9.9	1 (reference)	
<i>H. pylori</i> positive	2.0	2.80 (1.42-5.53)		6.0	2.02 (1.03-3.88)	
≥4th line (n= 47)			0.04			0.18
<i>H. pylori</i> negative	2.6	1 (reference)		6.7	1 (reference)	
<i>H. pylori</i> positive	1.0	2.00 (1.11-4.00)		2.5	1.61 (0.81-3.20)	

Supplemental Figure 1. Survival curve of progression-free survival (PFS) in patients with gastric cancer undergoing first-line immune checkpoint inhibitor (ICI) therapy with concurrent chemotherapy by *H. pylori* status.



Supplemental Figure 2. Survival curves of patients with gastric cancer treated with immune-checkpoint inhibitors by *H. pylori* infection timing: A, Progression-free survival (PFS); B, Overall survival (OS).

