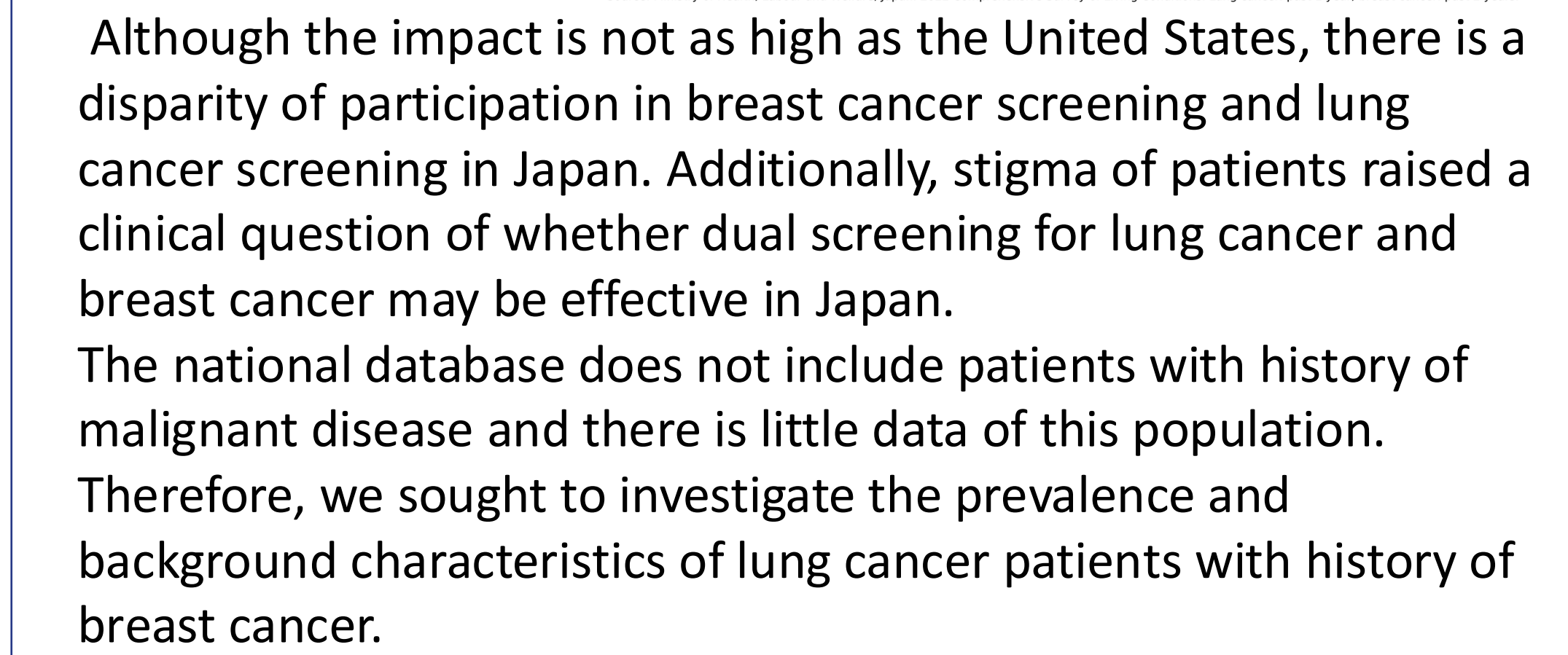


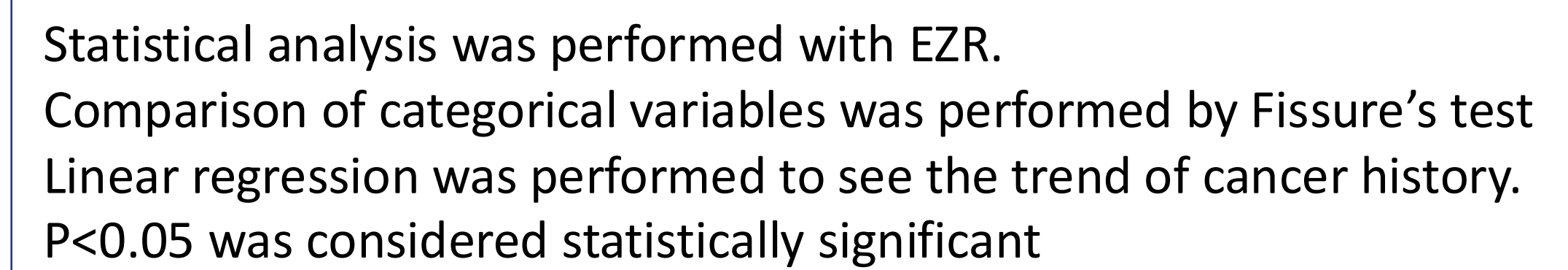


**SEPTEMBER 12 – 15, 2026
SEOUL, REPUBLIC OF KOREA**

Several studies have reported the impact on dual screening for lung cancer and breast cancer in women with history of smoking. In Japan, the top three cancer incidence in Japanese women are colorectal cancer (CRC), breast cancer (BC), and lung cancer (LC), respectively. Additionally, the characteristics of female lung cancer patients in Japan are generally younger, and that they have no history of smoking.



Design:
A Single center Retrospective database study

 **Current Study Findings**

Patients with history of breast cancer presented with **slightly advanced clinical stages** of lung cancer compared to those without. These tumors were observed to contain more **solid components**.



Future Perspectives

Whether stigma is influencing the lower annual screening must be evaluated. Survey of breast cancer survivors are required. Data of advanced lung cancer patients may further reveal the possibility of missed annual screening.

References

- ### Artificial Intelligence (AI) Use Disclaimer

Gemini Notebook was used to summarize the references and the content.
Microsoft copilot and ChatGPT was used to craft the figures.
Chat GPT was used to translate Japanese literature into English in references.
All data was further refined by the authors.

Women who received surgery for primary lung cancer with no history of smoking
N=1541

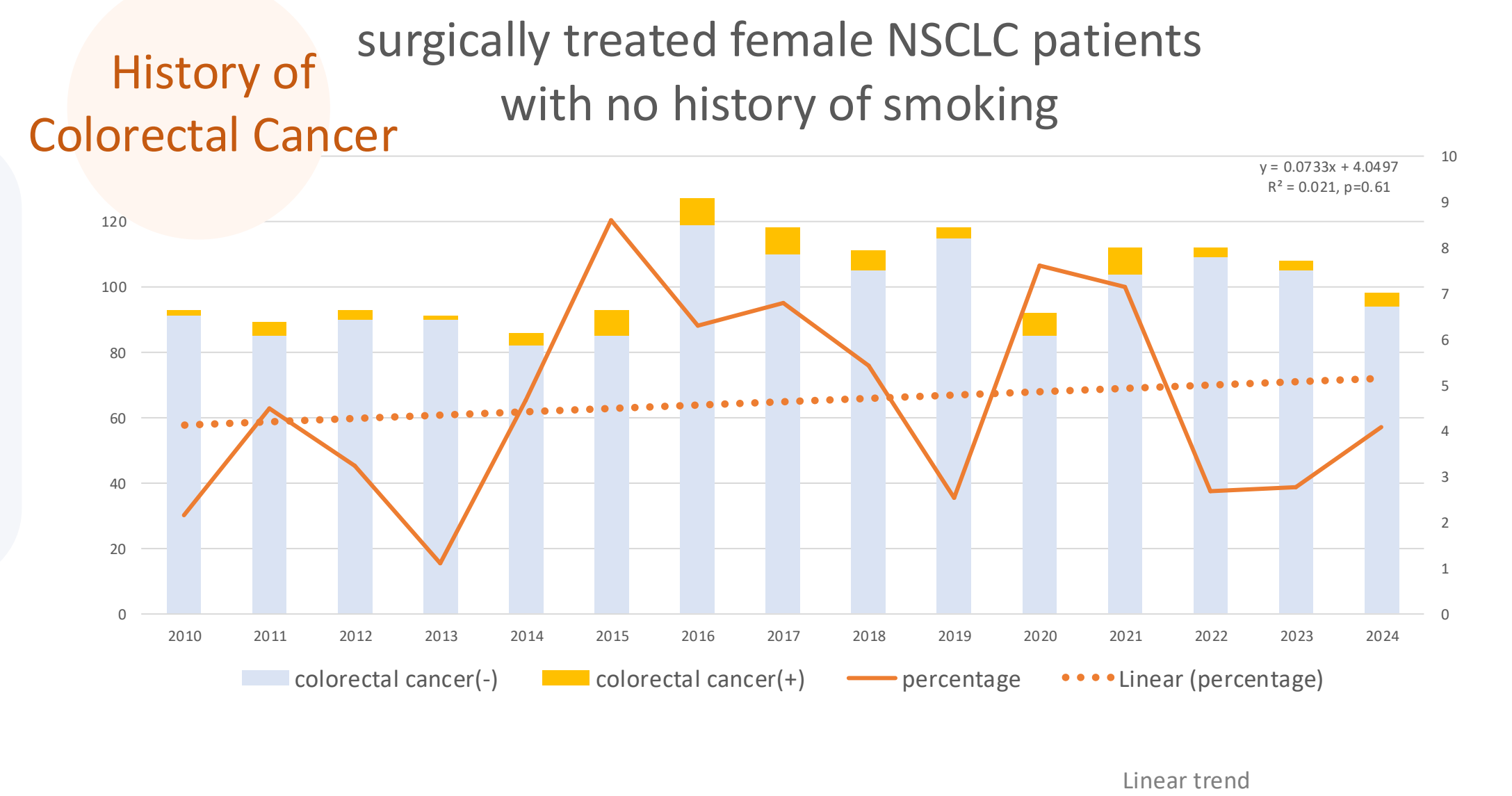
History of Breast Cancer
N=157 (10.2%)

History of Colorectal Cancer
N=64 (4.2%)

Both
N=8 (0.5%)

*Comorbidity of high blood pressure was 25%

Breast cancer survivors and Colorectal cancer survivors have been increasing among the years.
The prevalence of patients with breast cancer is now the second highest comorbidity next to hypertension



Group	annual screening	follow up screening	symptoms	other/unknown
BC(-)	57%	32%	8%	2%
BC(+)	37%	57%	5%	1%
CC(-)	57%	33%	8%	2%
CC(+)	38%	68%	2%	2%

Follow up screening includes screening for non-malignant disease
Symptoms are those related to primary lung cancer

Stacked bar chart showing the percentage of patients with different histological types (GGO, Part-solid GGO, Solid, Other) for BC(-), BC(+), CC(-), and CC(+) groups. The chart shows a 5% increase in Part-solid GGO for BC(+) compared to BC(-). P-values are shown for comparisons between BC(-) and CC(-) (P=0.18) and BC(+) and CC(+) (P=0.68).

Group	GGO	Part-solid GGO	Solid	Other
BC(-)	16%	57%	27%	0%
BC(+)	13%	54%	32%	1%
CC(-)	15%	56%	28%	1%
CC(+)	19%	51%	29%	0%

Stacked bar chart showing the distribution of histological types (IV, III, IIB, IIA, IB, IA3, IA2, IA1, 0) for BC(-) and BC(+) groups. The p-value for the comparison is 0.14. The BC(-) group shows a higher proportion of IA1 and IA2 types compared to the BC(+) group.

Group	IV	III	IIB	IIA	IB	IA3	IA2	IA1	0
BC(-)	~2%	~0%	~3%	~10%	~0%	~15%	~25%	~27%	~12%
BC(+)	~2%	~0%	~3%	~10%	~0%	~15%	~20%	~20%	~12%

Lung cancer detection by annual screening decreases with history of malignant tumors.
Caution in interpreting as the annual screening is different among
Breast cancer annual check-ups : mammography and ultrasound
Colorectal cancer annual check-ups: include chest CT-scans
>The cause of lower detection rate by annual screening is different

Distribution of solid tumors was higher in breast cancer survivors

Clinical stage is slightly earlier in the BC(-) group but with no statistical significance