

## Introduction:

Rehabilitation has been shown to be effective for cancer patients. Some studies also reported that rehabilitation in palliative care units contributes to the maintenance of quality of life <sup>1)2)</sup>.

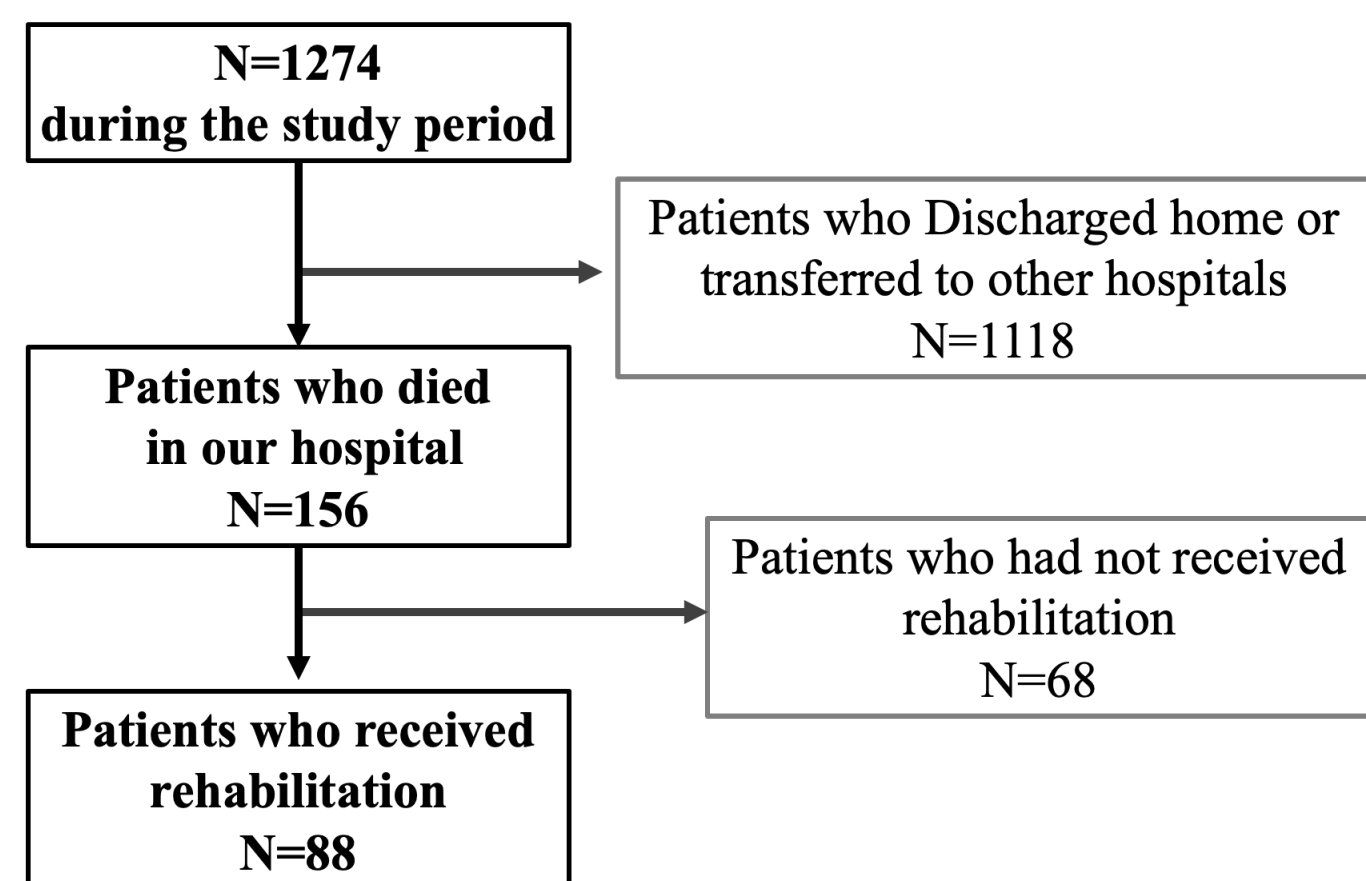
But its role for those in the terminal stage in general hospital remains unclear. Therefore, this study aimed to investigate the rehabilitation requirements of terminally ill cancer patients in acute general hospitals.

## Methods:

We retrospectively surveyed 1274 cancer patients who were admitted to National Hospital Organization Tokyo Medical Center between January 2017 and March 2022 and who required team consultation services for palliative care.

## Results:

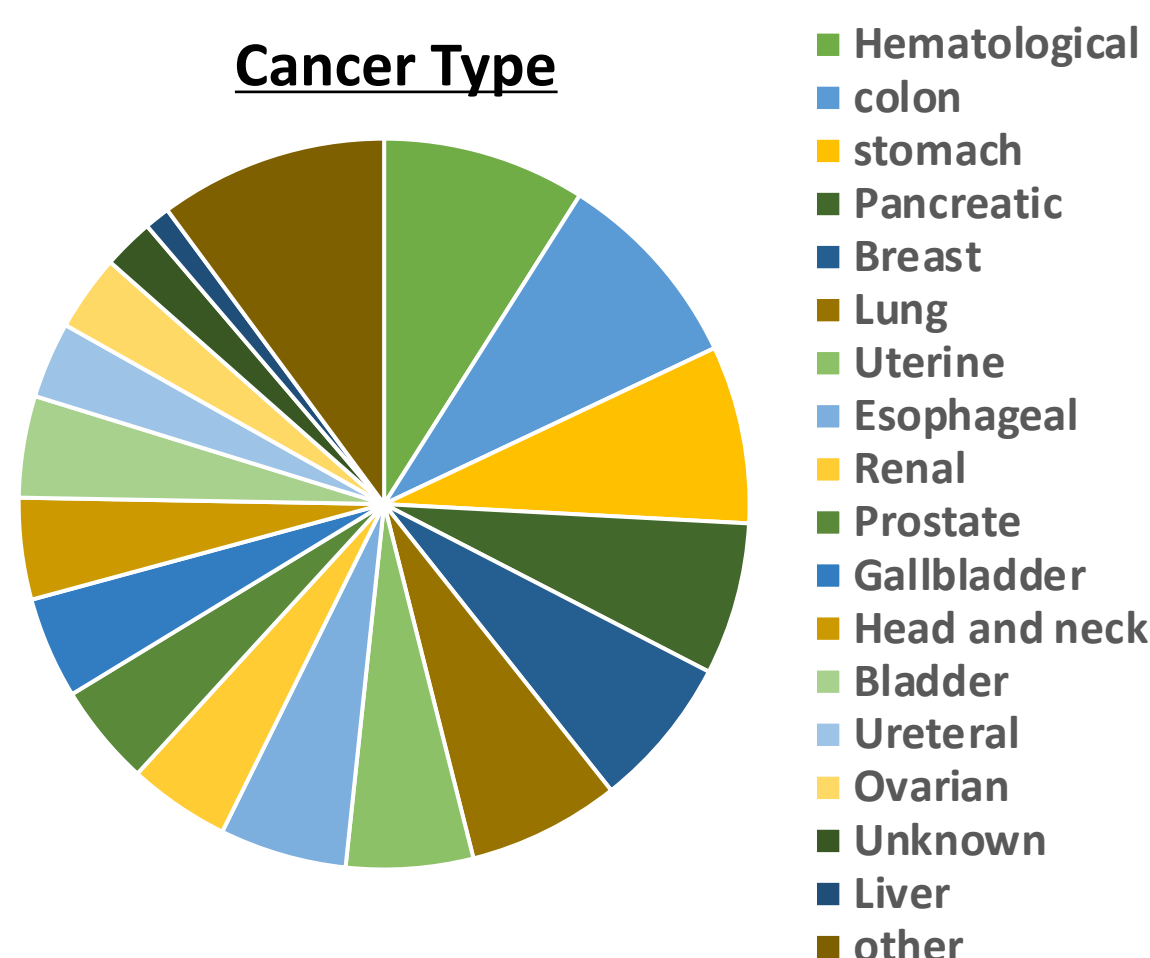
### Flow chart of the study participants



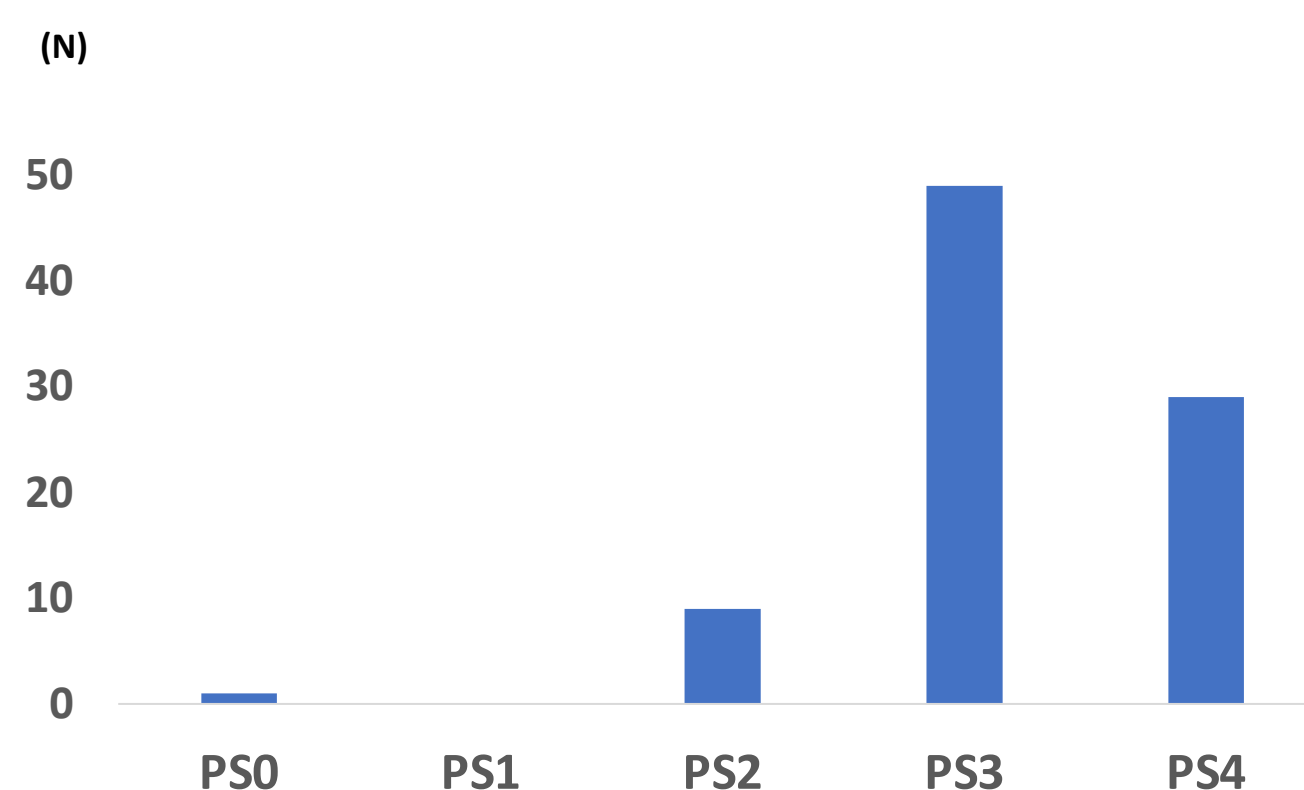
### Participants characteristics

Average age, years	70 ± 13.1
Male	n=41 (46.6%)
Female	n=47 (53.4%)
Stage of illness	
stage1	n=1 (1.1%)
stage2	n=2 (2.3%)
stage3	n=5 (5.7%)
stage4	n=48 (54.5%)
recurrence	n=28 (31.8%)
unclear	n=4 (4.5%)
Bone metastasis	n=40 (45.5%)
Average NRS-Pain	2.1 ± 2.7
NRS-Pain ≥4	n=22 (25.0%)
Average NRS-Breathing difficulty	0.89 ± 2.6
NRS-Breathing difficulty ≥4	n=8 (9.1%)
Necessity of medical narcotics	n=58 (65.9%)
Serum Alb	2.5 ± 0.5g/dL
C-reactive protein	8.2 ± 6.1

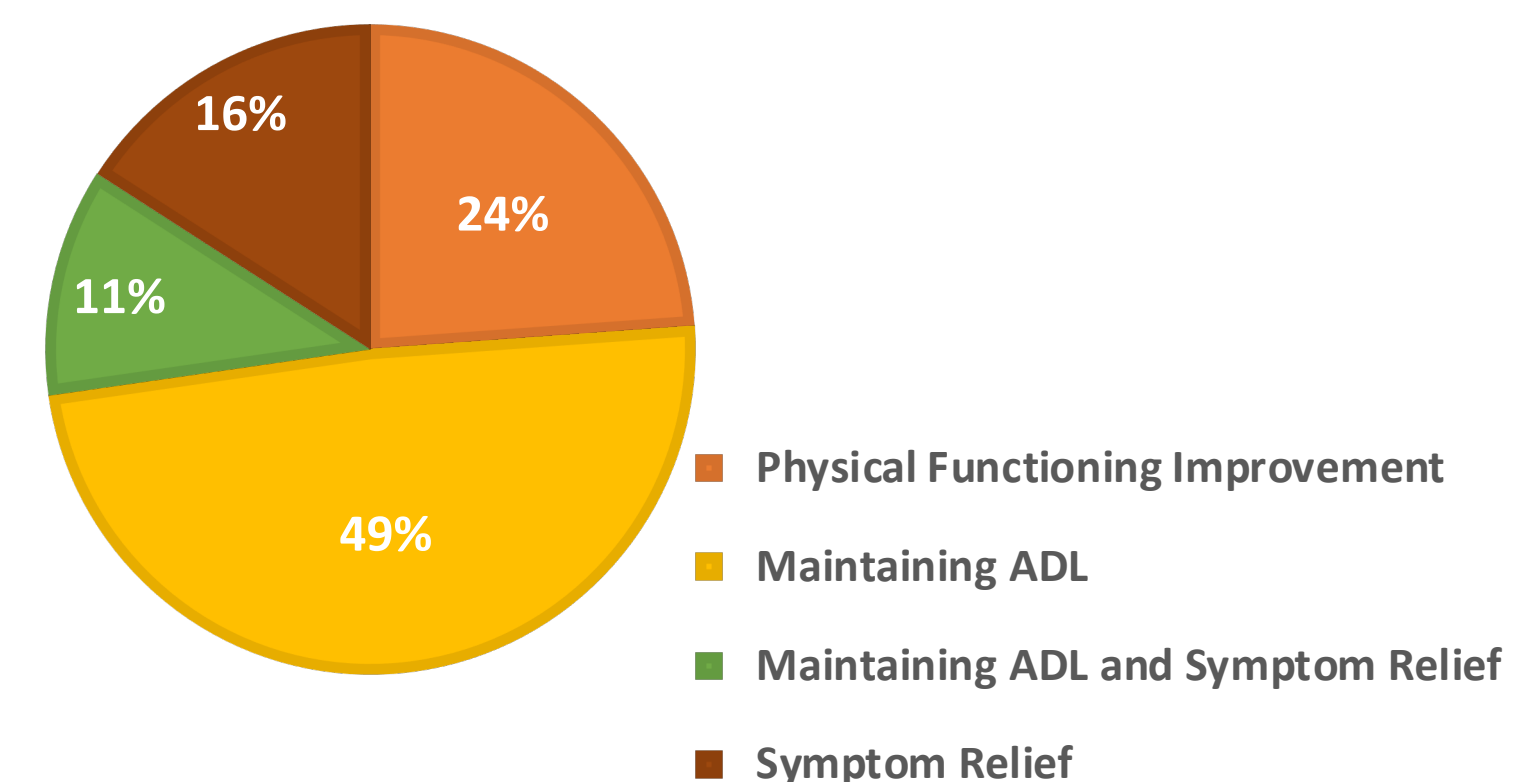
### Cancer Type



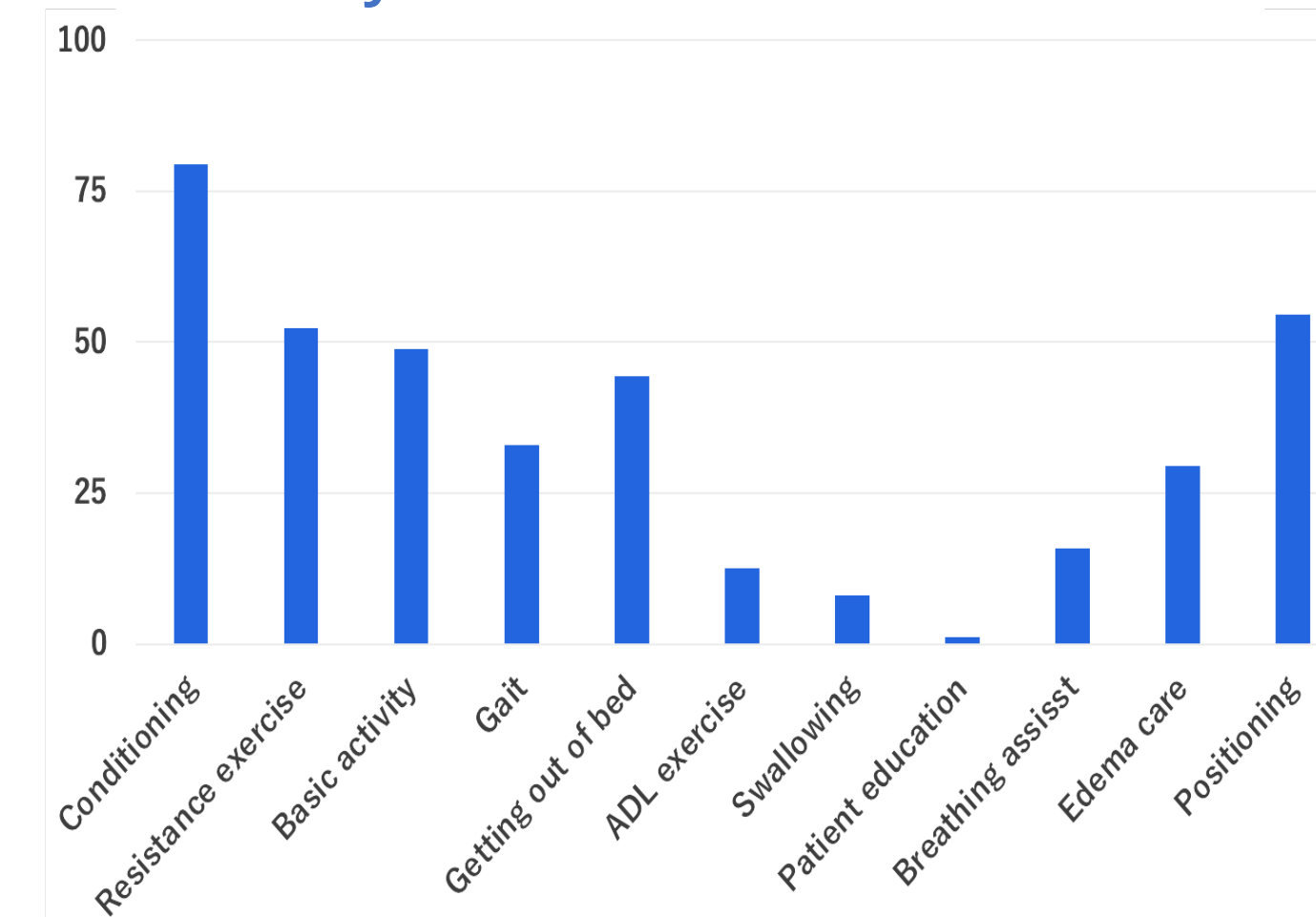
### Base line ECOG-PS



### Rehabilitation goals at Start



### Implementation rate by rehabilitation content



### Comparison of gait-trained and non-gait-trained group

	gait trained group (n=29)	Non gait trained group (n=59)	p-value
Age, years	70.4 ± 15.7	70.6 ± 11.7	0.69
Base line ECOG-PS	2.9 ± 0.6	3.4 ± 0.6	<0.001
Base line Barthel Index	51.3 ± 25.0	23.7 ± 24.3	<0.001
Average NRS-Pain	2.5 ± 3.2	1.9 ± 2.4	0.70
Average NRS-Breathing difficulty	0.4 ± 1.9	1.1 ± 2.8	0.16
Serum Alb	2.6 ± 0.5	2.5 ± 0.6	0.31
C-reactive protein	8.2 ± 6.2	8.2 ± 6.2	0.87
Days from admission to start of rehabilitation, days	12.7 ± 14.8	13.4 ± 11.3	0.11
Average days of rehabilitation	16.8 ± 10.7	10.6 ± 10.7	0.02
Training participation rate,%	85.2 ± 18.1	82.5 ± 20.6	0.99
Duration of body position adjustment in bed, days	1.1 ± 2.4	6.4 ± 10.6	0.002

■ During the rehabilitation period, 76 patients (86.4%) undertook physical functional exercise or ADL practice, and 29 patients (33.0%) had gait training.

■ Average days of rehabilitation 12.6 ± 13.8

■ Average time from last rehabilitation to death, days 3.7 ± 3.6

■ Compared to the non-walking group, patients in the walking training group had significantly better scores on both the ECOG Performance Status Scale and Barthel Index at the start of rehabilitation. They also had a significantly lower rate and shorter duration of postural adjustments in bed before death (31.0% vs. 65%, 4.1 ± 14.8 days vs. 7.8 ± 12.5 days).

### Discussion:

The findings of this study indicate that many patients wanted to continue to perform daily activities by themselves until the end of life, and requested appropriate training. Moreover, patients who were provided with gait training maintained their ability to adjust their body position after becoming bedridden. This may help to reduce pain and discomfort in bed-ridden, terminally ill patients.

### References:

- 1) Takaaki Hasegawa et al. J Pain Symptom Manage. 2020 Dec;60(6):1163-1169.
- 2) Ryuichi Sekine et al. Am J Hosp Palliat Care. 2015 Nov;32(7):695-702.