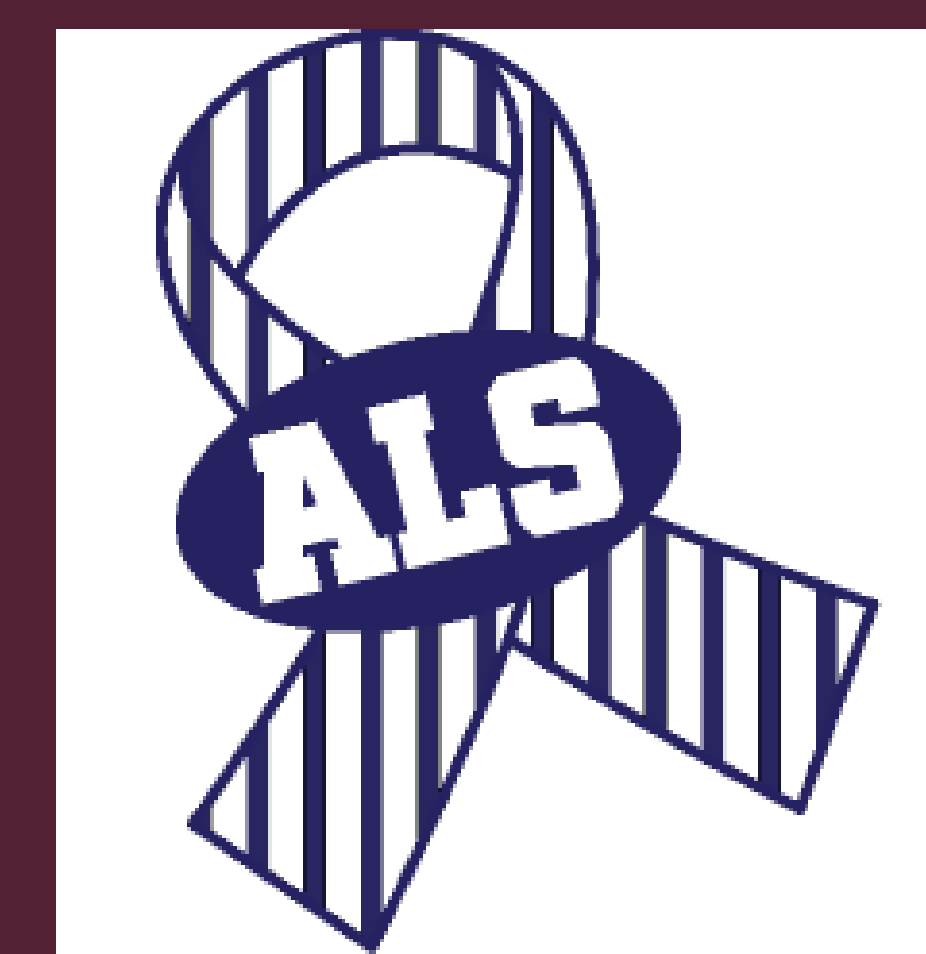


# Functional Mobility for An Elderly Person with Amyotrophic Lateral Sclerosis: A Case Report



Gianna G. Pezzano, BS, DPT Student, and Amy J. Litterini, PT, DPT  
 Doctor of Physical Therapy Program, University of New England, Portland, Maine

## UNIQUE

Typical Presentation:  
 Male  
 60 years old  
 Limb onset<sup>1,2</sup>

Patient Presentation:  
 Female 82 years old  
 Bulbar onset  
 Limb weakness  
 Fall risk

Amyotrophic Lateral Sclerosis (ALS)

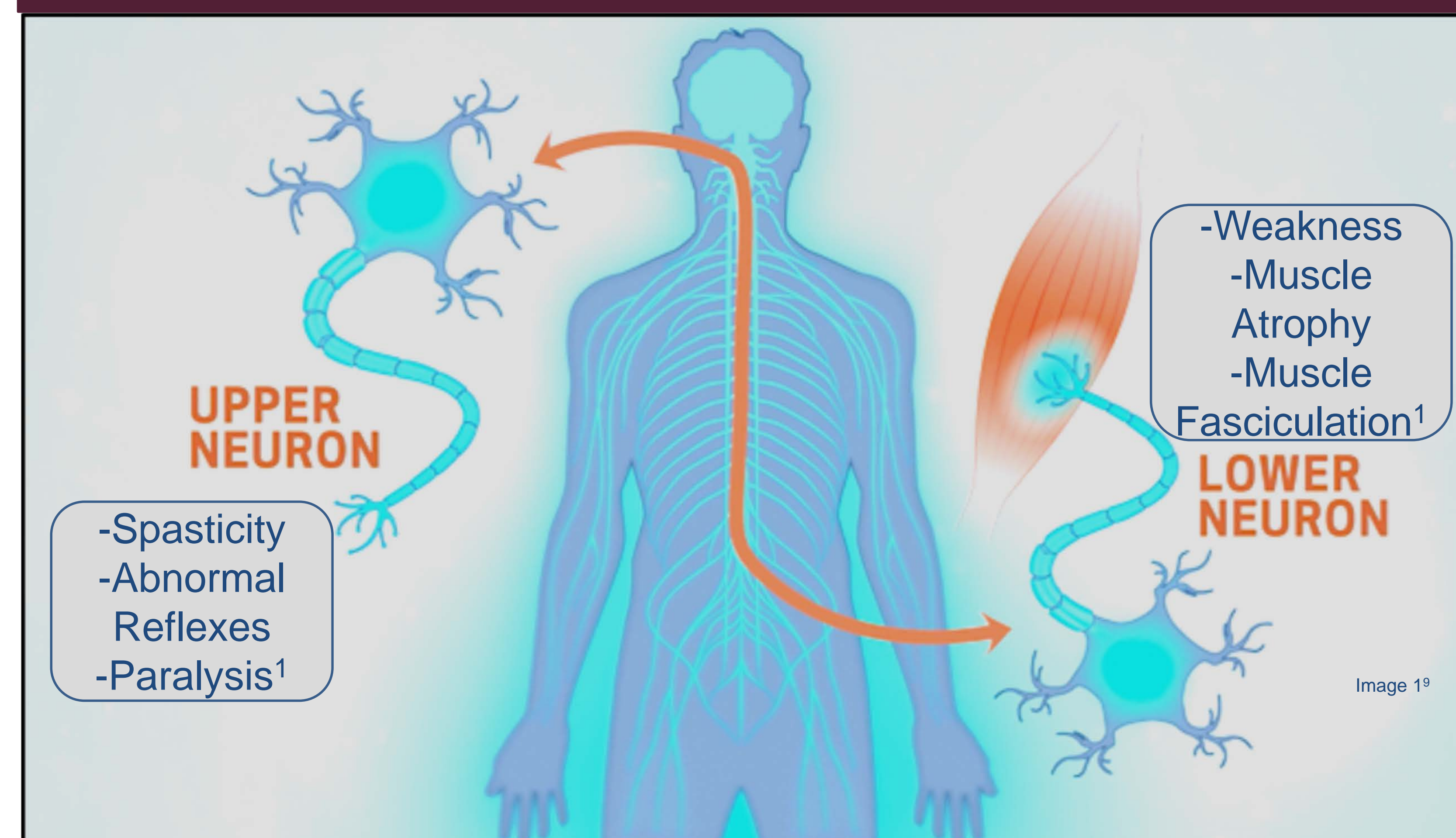
Ice Bucket Challenge began in 2014 to increase public awareness and funding for ALS.<sup>3,4</sup>

Need for further research was highlighted, in the campaign, for medical treatment and rehabilitation.<sup>3,4</sup>

## PURPOSE

Describe a palliative care physical therapy (PT) plan for maintenance of functional mobility and fall risk reduction for a patient with ALS.

## FOUNDATION

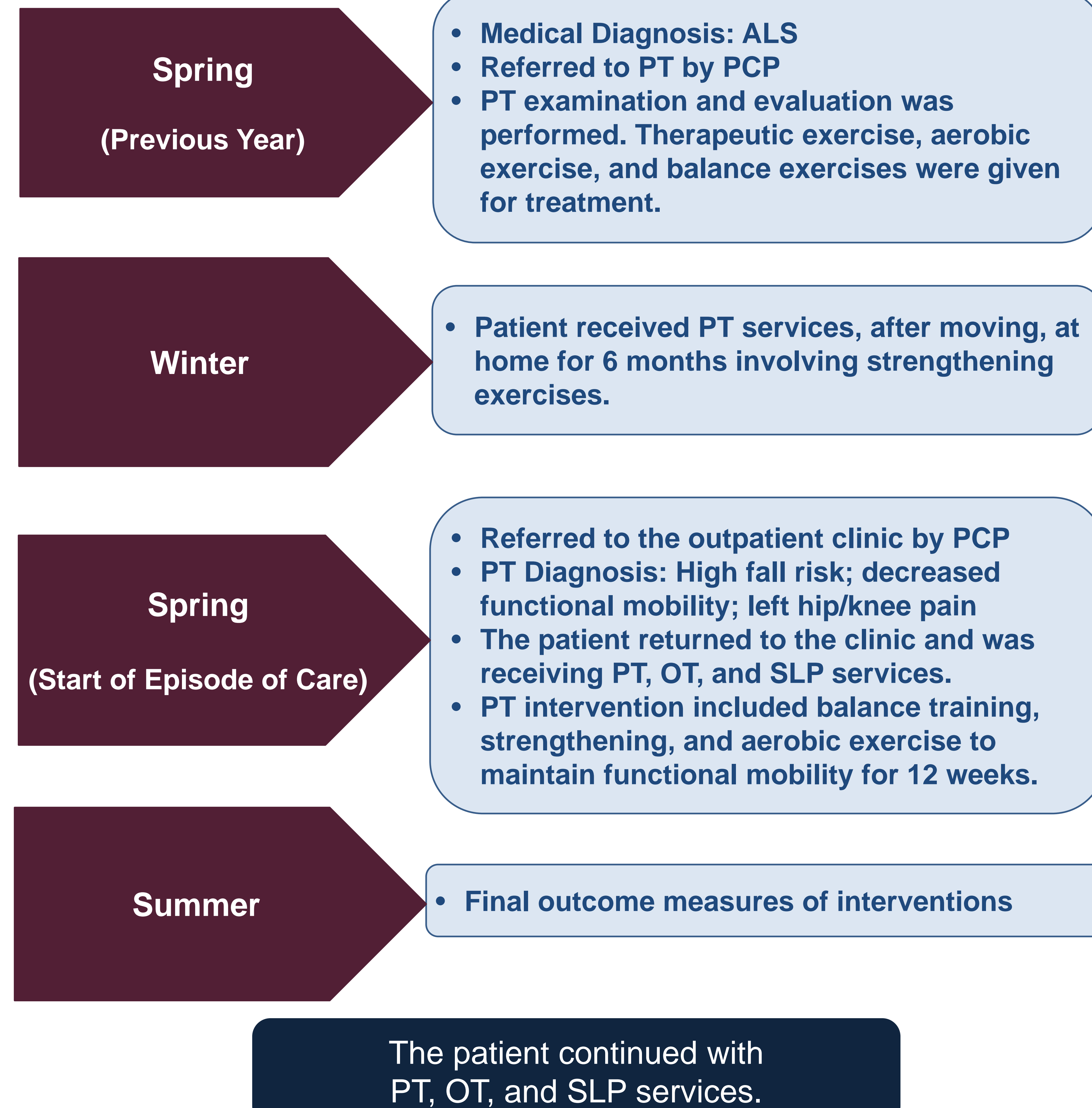


**GOALS OF PT TREATMENT FOR ALS:**  
 Promotion of independence and improvement in quality of life during disease progression

- Early Stage**
  - Assess fall risk
  - Assess need for adaptive equipment
  - Strength & Range of motion within the lower extremities (LE)
  - Balance
  - Aerobic exercise<sup>4</sup>
- Middle Stage**
  - Assess for assistive device and wheelchair use
  - Educate on transfers<sup>4</sup>
- Advanced Stage**
  - Hospice and palliative care
  - Caregiver education
  - Prevent skin break down
  - Prevent joint contractures<sup>4</sup>

## TIMELINE OF CARE

Previous Medical History: Left Hip Osteoarthritis, Aortic Murmur, Asthma



## CASE DESCRIPTION

An 82-year-old female with ALS received PT treatment for balance training to decrease fall risk, as well as therapeutic exercise to maintain strength for activities of daily living.

Diagnosis	Primary Complaint	PT Goal	Patient Challenges	Level of Function in Episode Of Care
ALS; decreased functional mobility, high fall risk, & left hip/knee pain secondary to osteoarthritis	Weakness in the LE, especially in the left hip from osteoarthritis	Maintain strength & balance	Stairs, (static/dynamic/sit/standing) balance, dysarthria, dropping things, & dysphagia	Community ambulator with a rollator; required some assistance with activities of daily living by husband

Table 1. Tests & Measures

	Initial Evaluation	Final Follow Up
Timed Up & Go	23.75 seconds	29 seconds
Berg Balance Scale	37/56	29/56
6 Minute Walk Test (6MWT)	420 feet =128.02 meters	412 feet =125.58 meters
Strength Left Dorsiflexion	4-/5	3+/5

## CONCLUSION

- Balance training and therapeutic exercise, in this case report, demonstrates the role of maintaining function in palliative care.
- It is an example of how PT services can be utilized by continuing to promote functional independence with terminal neurodegenerative diseases.
- In 2018, The American Physical Therapy Association (APTA) House of Delegates approved motion 46-18 *Charge: Eliminating the Improvement Standard for Receiving Physical Therapy*, which supports PT services for hospice and palliative care in the maintenance of function.<sup>8</sup>
- This public policy charge to the APTA has the potential to allow future practitioners to help patients, such as this, with support for reimbursement of care due to degenerative diseases.

## FUNDING SOURCE

Not supported by institutional grants or external funding

## REFERENCES

- Wijssekera L, Leigh PN. Amyotrophic lateral sclerosis. *Orphanet J Rare Dis.* 2009;4:3. doi:10.1186/1750-1172-4-3
- Prevalence of amyotrophic lateral sclerosis - united states, 2014. Centers for Disease Control and Prevention Web site. <https://www.cdc.gov/mmwr/volumes/67/wrmm6707a3.htm>. Accessed July 18, 2017.
- ALS ice bucket challenge commitments. ALS Association. <http://www.alsa.org/fight-als/ice-bucket-challenge-spending.html>. Accessed July 19, 2018.
- Majumdar S, Wu J, Paganoni S. Rehabilitation in amyotrophic lateral sclerosis: why it matters. *Muscle Nerve.* 2014;50(1): 4-13. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4433000/>. Accessed June 18, 2018.
- Barbour K E, Stevens J A, Helmick C G, et al. Falls and fall injuries among adults with arthritis - united states, 2012. *JSTOR.* 2014;63(17):379-383.
- Lesinski M, Hortobagyi T, Muehlbauer, et al. Effects of balance training on balance performance in healthy older adults: a systemic review and meta-analysis. *Sports Med.* 2015;45:1721-1738. doi: 10.1007/s40279-015-0375-y
- Hamed A, Bohm S, Mermann F, Arampatzis A. Exercises of dynamic stability under unstable conditions increase muscle strength and balance ability in the elderly. *Scand J Med Sci Sports.* 2018;28(3):961-971. doi: 10.1111/sms.13019
- American Physical Therapy Association. (2018). Eliminating The Improvement Standard For Receiving Physical Therapy. House of Delegates RC-46-18 [Charge]. Retrieved from <http://communities.apta.org/p/do/sd/sid=5077>. Accessed September 28, 2018.
- Diagnosis & management of ALS. Houston Methodist Website. [https://www.houstonmethodist.org/1285\\_houstonmethodist/1738\\_servicesandspecialties/2044\\_servicesandspecialties\\_neurologyandneurosurgery/2045\\_servicesandspecialties\\_ourservices/2095\\_servicesandspecialties\\_neuromusculardisorders/2097\\_servicesandspecialties\\_lougeheridisease/noitem\\_servicesandspecialties\\_lougeheridisease\\_diagnosis/trea/](https://www.houstonmethodist.org/1285_houstonmethodist/1738_servicesandspecialties/2044_servicesandspecialties_neurologyandneurosurgery/2045_servicesandspecialties_ourservices/2095_servicesandspecialties_neuromusculardisorders/2097_servicesandspecialties_lougeheridisease/noitem_servicesandspecialties_lougeheridisease_diagnosis/trea/). Accessed November 18, 2018.
- What is ALS. ALS Foundation for Life Website. <http://www.alsfoundation.org/learn/>. Accessed November 18, 2018.

## ACKNOWLEDGEMENTS

• The author acknowledges Julie Bouchard, DPT, for her assistance and guidance in the patient's care, and the patient for her participation.

