

# Barriers and Limitations of Implementing the Malnutrition Screening Tool (MST) in a Large U.S Cancer Center (ID 3405)

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## Background

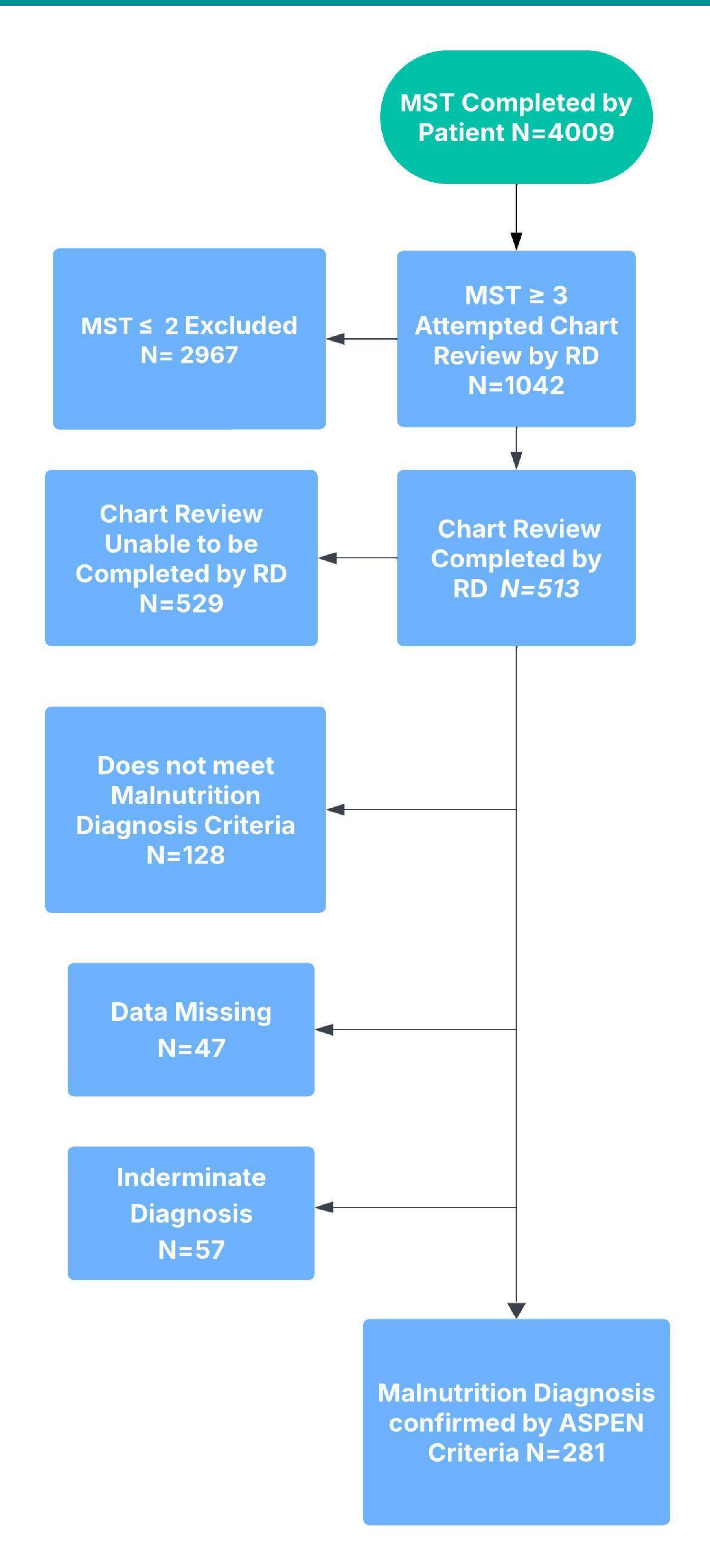
- Malnutrition is an important and prevalent issue in cancer care, associated with increased risk of mortality and morbidity.
- Early identification of malnutrition risk is crucial to improve outcomes.**
- The Malnutrition Screening Tool (MST), a patient-reported measure, has been developed to address this need. However, studies on real world implementation are lacking.

## Methods

- This study evaluates the use of the MST at Atrium Health Levine Cancer (AHLA), a large U.S. Cancer Center, to enhance **outpatient** malnutrition screening in cancer patients
- Patients seen at AHLA completed MST during initial presentation as part of an electronic distress screening tool
- Patients with an MST score  $\geq 3$  out of 5 were considered at risk for malnutrition.
- Registered dietitians (RDs) conducted chart reviews to determine diagnostic eligibility using clinician-reported American Society for Parenteral and Enteral Nutrition (ASPEN) consensus criteria.
- Patients without a cancer diagnosis, enrolled in hospice, deceased, or with missing data were excluded.



## The yield of identifying malnourished patients using MST in the outpatient setting was lower than expected



### Malnutrition Screening Tool (MST)

Have you lost weight recently without trying?	
No	0
Unsure	2
If yes, how much weight (kilograms) have you lost?	
1-5	1
6-10	2
11-15	3
>15	4
Unsure	2
Have you been eating poorly because of a decreased appetite?	
No	0
Yes	1
Total	
Score of 2 or more = patient at risk of malnutrition.	

Table 1: Description of Patient Followup and Final Malnutrition Diagnosis

Meets ASPEN Malnutrition Criteria after Chart Review by RD		N=281
MST Score		
3	144	(51%)
4	82	(29%)
5	54	(19%)
Missing=1		
Follow-Up Type		N=281
In-person	50	(18%)
Phone Call	93	(33%)
RD already following	74	(26%)
RD Unable to Contact/Missing	64	(23%)
Malnutrition Risk Diagnosis		N=77
Mild	21/77	(27%)
Moderate	19/77	(25%)
Severe	37/77	(48%)

MST= Malnutrition Screening Tool, ASPEN= American Society for Parenteral and Enteral Nutrition RD =Registered Dietician

## Results:

- 4,009 patients screened at the time of diagnosis (5/2019-12/2019), 1,042 (26%) were identified as at risk for malnutrition.
- Chart reviews of 513 patients yielded 281 eligible for follow-up. Only 2% of the total screened (77/4009) had confirmed malnutrition diagnosis by ASPEN criteria. 47% (36/77) of malnourished patients had severe
- Follow-up methods were varied, however, RDs were unable to contact 23% of eligible patients

## Discussion

- This study reveals significant limitations in MST implementation in real-world practice.
- Challenges included missing information in electronic health records, difficulty contacting patients, and potential inaccuracies in patient-reported data.
- These findings suggest that broad usage of MST in outpatient settings faces potential barriers to implementation in outpatient settings.

## Conclusion:

- The yield of identifying severely malnourished patients was lower than previously reported.
- However, we were still able to screen many patients N=4009 and the scale of our screening efforts is unique amongst US Cancer Centers.
- Future studies are needed to improve implementation of the MST. Potentially AI could be used to enhance the screening process and improve efficiency.