

# Prospective Multicenter Validation of a Screening Tool to Identify Elder Abuse in the Emergency Department

USC Judith D. Tamkin International Symposium on Elder Abuse

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# Disclosures

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- National Institute of Justice (2015-IJ-CX-0022)
- The John A. Hartford Foundation
- The Gordon and Betty Moore Foundation
- Geriatric Emergency care Applied Research (GEAR) network (NIA)

# The Team

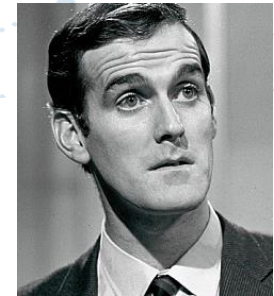
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# Outline

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- ED Senior AID Tool
  - Derivation
  - Validation
- Challenges and Limitations

# Epidemiology of Elder Abuse in the ED

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- Prevalence in the ED
  - 7% (9/138) among cognitively intact (past year)<sup>1</sup>
  - 6.5% (17/259) among pts consenting to abuse screen (current)<sup>2</sup>
  - 3.6% (33/916) among pts consenting to abuse screen (current)
  - Actual prevalence of current elder abuse? 5%-10%
- During usual care, most ED elder abuse is missed:
  - Our study of 9 case of 138 pts - none identified in ED<sup>1</sup>
  - National data – ICD-10 diagnosis of elder abuse = 0.01%<sup>3</sup>

1. Stevens TB, et al. Prevalence of nonmedical problems among older adults presenting to the emergency department. *Acad Emerg Med.* 2014;21(6):651–658

2. Platts-Mills TF, et al. Development of the Emergency Department Senior Abuse Identification (ED Senior AID) tool. *J Elder Abuse Negl.* 2018; 30(4): 247-70.

4. Evans CS, et al. Diagnosis of Elder Abuse in U.S. Emergency Departments. *J Am Geriatr Soc.* 2017;65(1):91–97.

# ED Senior AID Tool

## Priorities for the Tool

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- Brief, especially for patients with screen negative
- Applicable to all patients, including cognitively impaired
- Cover key domains (neglect, psych, physical, financial)
- Accurate (sensitive and specific)
- Include a physical exam for a subset of patients
- Done by ED nurses at bedside, not triage
- Leverage clinical judgement of ED nurses (not a score)



# Derivation

## Setting and Participants

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- Single Site
  - University of North Carolina at Chapel Hill ED
- September 2015 – June 2017
- Eligibility:
  - ED patients 65+
  - English speaking
  - Not critically ill
  - Consent / LAR consent
- Screening tool administered by RNs and RAs
- Family/caregivers asked to leave room

# Derivation

## Tools Components

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### Cognitive Assessment

- AMT4: Age, Date of Birth, Place, Year

### Elder Abuse Questions

- 15 questions, covering 4 domains: neglect, psychological, physical, financial

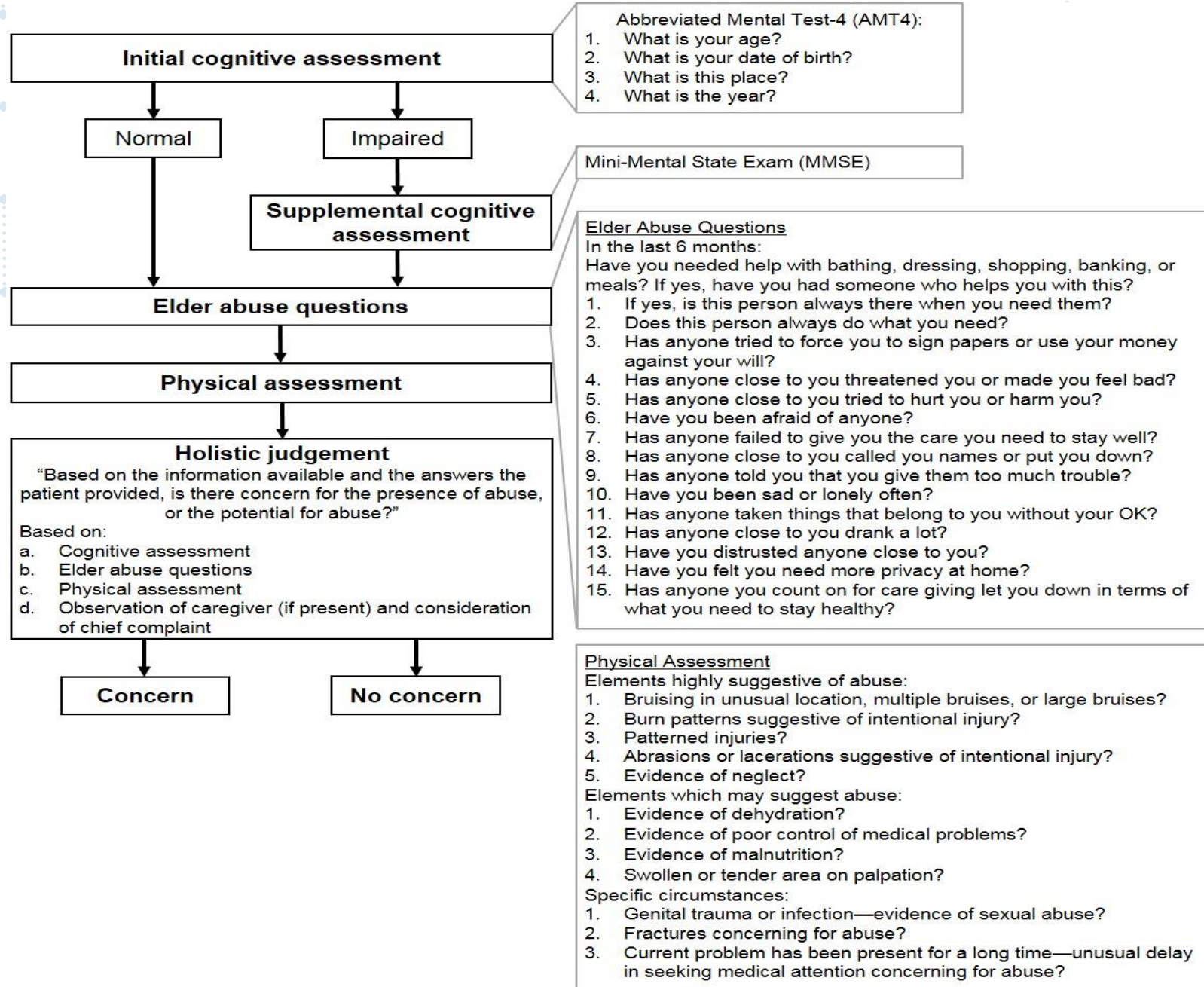
### Physical Assessment

- All patients with cognitive impairment or at assessor's discretion based on chief complaint, caregiver behavior, appearance

### Holistic Judgment

- “Do you suspect an ongoing problem of elder abuse?”





**Table 2.** Characteristics of individuals identified with suspicion of abuse (n=17).

Age	Sex	Race	Chief Complaint	AMT4, MMSE Scores <sup>a</sup>	Type of Abuse				Alleged Perpetrator
					Psych.	Neglect	Financial	Physical	
65	F	White	MVC, back pain	4					Husband
65	F	White	Seizure	4					Son
66	F	White	Wrist pain	4					Husband
67	M	Black	Pneumonia	2, 21					Uncertain
68	M	Asian	Alcohol problem	4					Friend
69	F	Black	Medical problem	4					Nursing home
71	F	White	Diarrhea	4					Son
71	F	Black	Arm pain	2, 18					Husband
73	F	Black	Anxiety	3, 17					Husband
73	F	Black	Abdominal pain, emesis	4					Husband
75	M	White	Knee pain, alcohol	4					Children
76	F	White	Failure to thrive	4					Assisted living
76	M	White	Fever, syncope	4					Wife
77	F	White	Back pain	4					Boyfriend
79	F	White	Shortness of breath	2, 16					Daughter
84	F	White	Stroke, aphasia	4					Daughter
≥90	F	White	Fall, possible UTI	4					Son

a. Patients with an Abbreviated Mental Test-4 (AMT4) score <4 completed the Mini-Mental State Exam (MMSE), where MMSE scores of 21-26 indicate mild impairment, 11-20 indicates moderate impairment, and <11 indicates severe impairment.

**Total N=259**  
**17 positives (7%)**

**Table.** Responses to elder abuse questions for patients who screened positive for abuse. Dark gray=positive. Light gray=refused to respond.

Patient	Tested Questions														
	Psychological							Neglect				Financial		Physical	Risk Factor
	1	2	3	4	5	6	7	1	2	3	4	1	2	1	1
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															

Plus data for 242 patients who screened negative.

<b>Combinations: Hand selected, including all four domains</b>		
C1: Psy-1, Neg-3, Fin-1, Ph-1	76 (50, 93)	92 (88, 95)
C2: Psy-1, Neg-3, Fin-2, Ph-1	76 (50, 93)	88 (84, 92)
C3: Psy-1, Neg-4, Fin-1, Ph-1	65 (38, 86)	94 (90, 96)
C4: Psy-1, Psy-5, Neg-3, Fin-1, Ph-1	88 (64, 99)	64 (58, 70)
C5: Psy-4, Neg-3, Fin-1, Ph-1	76 (50, 93)	95 (91, 97)
C6: Psy-1, Psy-4, Neg-3, Fin-1, Ph-1	82 (57, 96)	92 (88, 95)
<b>Combinations: Classification and Regression Tree (CART) analysis</b>		
C7: Psy-3, Psy-4, Neg-1	88 (64, 99)	91 (87, 95)
<b>Combinations: Logistic regression</b>		
C8: Psy-3, Psy-4, Neg-1 <sup>e</sup>	88 (64, 99)	91 (87, 95)
C9: Psy-3, Psy-4, Psy-7, Neg-1, Neg-3 <sup>f</sup>	94 (71, 100)	87 (82, 91)
<b>Combinations: Logistic regression, modified</b>		
C10: Psy-1, Psy-3, Psy-4, Neg-1 <sup>g</sup>	94 (71, 100)	90 (86, 94)
C11: Psy-1, Psy-3, Psy-4, Neg-1, Fin-1, Ph-1 <sup>h</sup>	94 (71, 100)	90 (85, 93)

**Table.** Responses to elder abuse questions for patients who screened positive for abuse. Dark gray=positive. Light gray=refused to respond.

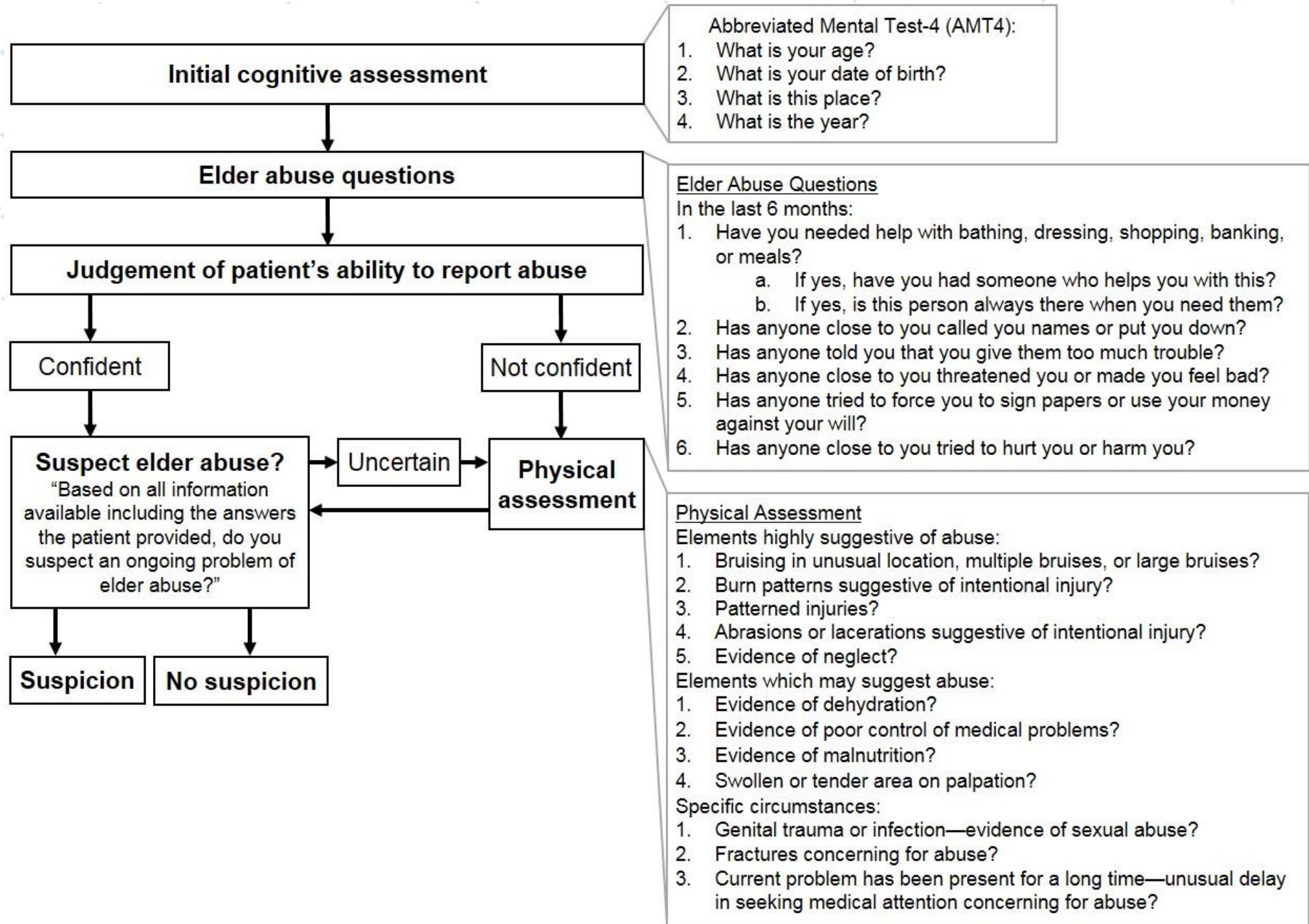
Patient	Tested Questions														
	Psychological							Neglect				Financial		Physical	Risk Factor
	1	2	3	4	5	6	7	1	2	3	4	1	2	1	1
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															



Example of Selected Questions									
Psychological			Neglect	Financial	Physical	Combination			
1	3	4	1	1	1				



Derivation  
Final  
Version:  
ED Senior AID  
Tool



# Derivation Results

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Predictive accuracy of resulting  
combination of 6 EA questions:

Sensitivity 94% (95% CI 71-100%)  
Specificity of 90% (95% CI 85-93)\*

\*But compares accuracy of a combination of individual question items to the overall judgement by the same person. Not an independent reference standard.





# Validation Methods

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## Multicenter Prospective Study

- University of North Carolina Hospitals, Chapel Hill, NC
  - Cooper University Hospital, Camden, NJ
  - University of Florida Health, Jacksonville, FL
- May 2018 – August 2019
  - Eligibility:
    - ED patients 65+
    - English speaking
    - Not critically ill
    - LAR signed consent for patients without capacity to consent

# Validation Methods

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## ED Senior AID tool screen

Positive Screens

Negative Screens

10%

90%

No Further Evaluation

Structured Social and Behavioral Evaluation + Medical Records



Reference Standard (LEAD Panel)

# Validation

## Methods - Reference Standard

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### **LEAD approach (Longitudinal, Expert, All Data)**

#### Multi-disciplinary Panel

- Hospital social worker
- APS social worker
- Geriatrician
- Emergency physician w/ Geriatrics EM Fellowship training
- Emergency nurse w/ Sexual Assault Nurse Examiner training

#### Data

- ED provider note
- Discharge summary (for hospitalized patients)
- Social worker notes
- Structured Social and Behavioral Evaluation

# Validation Results

**Table 1.** Characteristics of all study participants and those with a positive screen for elder abuse.

Characteristic	N (%)	
	All patients (n=916)	Positive screen (n=33)
Sex		
Female	504(55.0)	25 (75.8)
Male	412(45.0)	8 (24.2)
Race		
White	634(69.2)	27 (81.8)
Black	251(27.4)	6 (18.2)
Education		
Some high school or less	145(15.9)	5 (15.2)
High school graduate or GED	232(25.4)	8 (24.2)
Some college or technical degree	215(23.5)	7 (21.2)
College graduate	146(16.0)	7 (21.2)
Post-graduate education	176(19.3)	6 (18.2)
Living arrangement		
Independent living	837(91.5)	25 (75.8)
Assisted living	41(4.5)	5 (15.2)
Nursing home	21(2.3)	2 (6.1)

# Validation Reference Standard Results

**Table 3.** Characteristics of individuals experiencing elder abuse based on LEAD panel judgement (n=17).

Age	Sex	AMT4 <sup>a</sup>	Type of Abuse				Alleged Perpetrator
			Psych.	Neglect	Financial	Physical	
65-74	F	4					Husband
65-74	F	4					Husband
65-74	F	4					Mother
65-74	F	4					Son
65-74	F	4					Mother
65-74	F	4					Daughter
65-74	F	4					Hired Aide
65-74	F	4					Nephew
65-74	F	3					Nursing Facility
65-74	M	4					Adopted Son
75-84	F	4					Assisted Living
75-84	F	4					Son
75-84	F	4					Nursing Facility
75-84	M	2					Son
75-84	F	4					Husband
75-84	F	3					Neighbor
≥85	F	4					Husband

<sup>a</sup>. AMT4 is the Abbreviated Mental Test-4, where scores <4 indicate impaired cognition.



# Validation

## Reference Standard Results

**Table 4.** Performance of the ED Senior AID tool in identifying elder abuse (n=125).

ED Senior AID Tool	LEAD Panel Reference Standard	
	Blinded	
	Positive	Negative
Positive	16	17
Negative	1	91
Sensitivity, %, (95% CI)	94.1 (71.3-99.9)	
Specificity, %, (95% CI)	84.3 (76.0-90.6)	
Positive Predictive Value, %, (95% CI)	48.5 (30.8-66.5)	
Negative Predictive Value, %, (95% CI)	98.9 (94.1-100)	



# Validation

## Reference Standard Results

**Table 4.** Performance of the ED Senior AID tool in identifying elder abuse (n=125).

ED Senior AID Tool	LEAD Panel Reference Standard			
	Blinded		Unblinded	
	Positive	Negative	Positive	Negative
Positive	16	17	28	5
Negative	1	91	1	91
Sensitivity, %, (95% CI)	94.1 (71.3-99.9)		96.6 (82.2-99.9)	
Specificity, %, (95% CI)	84.3 (76.0-90.6)		94.8 (88.3-98.3)	
Positive Predictive Value, %, (95% CI)	48.5 (30.8-66.5)		84.8 (68.1-94.9)	
Negative Predictive Value, %, (95% CI)	98.9 (94.1-100)		98.9 (94.1-100)	

# Extra Results

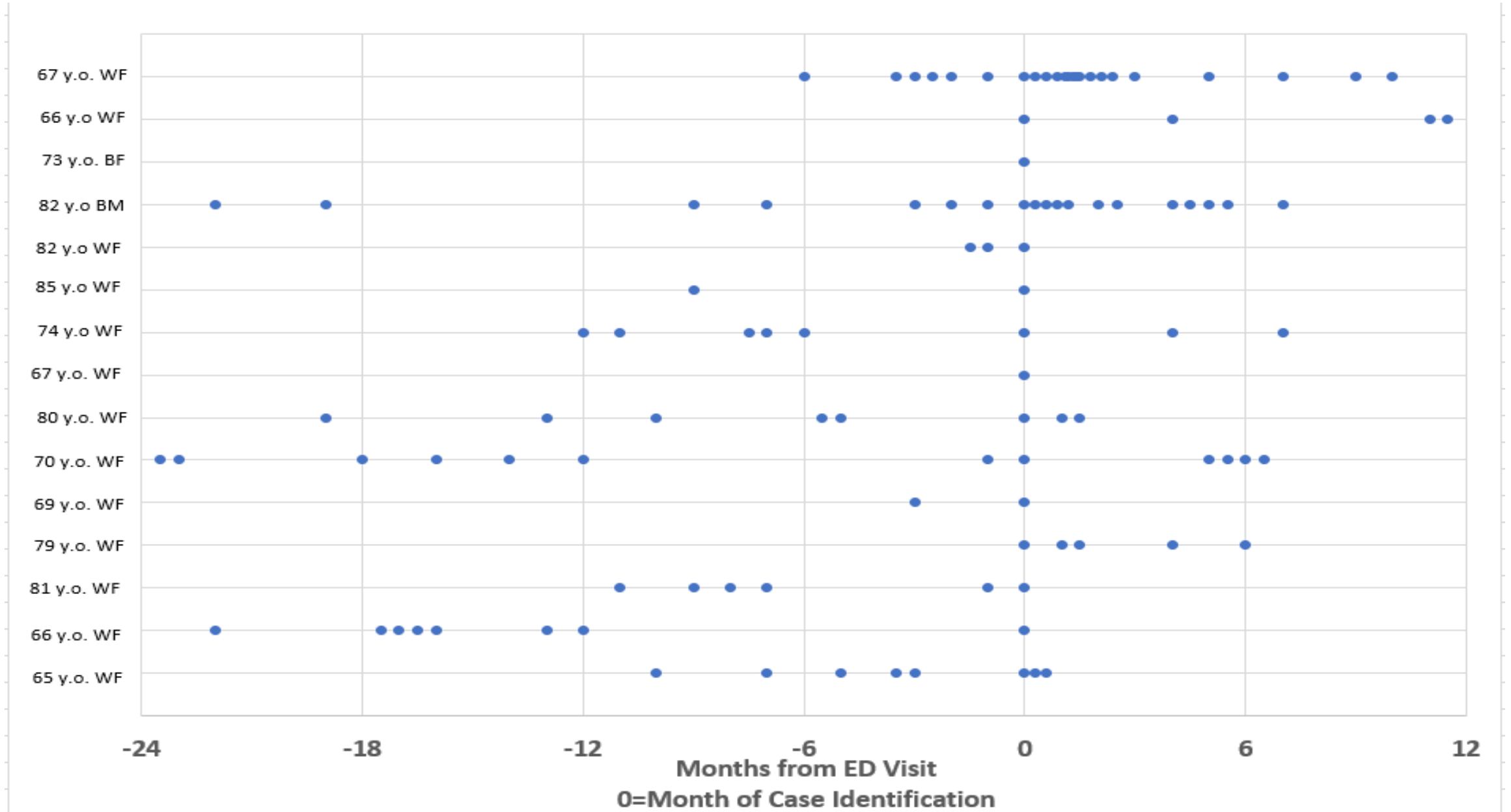
## Possible Scenarios for the

**Table 4.** Performance of the ED Senior AID tool in identifying abuse (n=125+791=916).

ED Senior AID Tool	LEAD Panel Reference Standard			
	Assume All Abused		Assume All Not Abuse	
	Positive	Negative	Positive	Negative
Positive	16	17	16	17
Negative	<b>792 (1)</b>	91	1	<b>882 (91)</b>
Sensitivity, %, (95% CI)	<b>2.0 (1.2-3.2)</b>		94.1 (71.3-99.9)	
Specificity, %, (95% CI)	84.3 (76.0-90.6)		<b>99.4 (98.7-99.8)</b>	
Positive Predictive Value, %, (95% CI)	48.5 (30.8-66.5)		48.5 (30.8-66.5)	
Negative Predictive Value, %, (95% CI)	<b>10.3 (8.5-12.5)</b>		<b>99.9 (99.3-100)</b>	

# Validation Extra Analysis

## Health Care Utilization Pre and Post Case Identification



# Limitations

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## Uncertainty in estimates of sensitivity

- Broad confidence intervals due to small number of cases identified by LEAD panel
- Reference standard for only 10% of negative screens, resulting in unknown reference standard for 791 patients.

Results reflect screening by research nurses (may differ from clinical nurses)

Increase in positive cases with unblinding of the LEAD panel suggests that the social worker evaluation (SSBE) may have been underpowered to identify abuse, possibly due to selection of questions or social worker culture/clinical demands

# Challenges

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- Requirement for signed consent:
  - Reduces prevalence.
  - Required by UNC IRB
  - Additionally, NC is mandatory reporting state and NIJ lawyers require that patient give permission before data is shared.
- Resource Intensive:
  - Study required sites with both research nurses and ED social workers.
  - Both of the planned non-UNC sites dropped out and had to be replaced.

# Clinical Implications

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- A screening tool which takes 90 seconds to administer can accurately identify elder abuse in the ED.
- Most cases of elder abuse in the ED cannot be identified based on chief complaint or physical findings. You have to talk to the patient.

# Future Efforts

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- EM-SART: Implementation effort that includes the ED Senior AID tool
- Prehospital screening tools
- The Holy Grail:
  - Cluster randomized trial of an integrated ED screening and response approach on long-term (i.e. 6-12 month) patient safety, health, and healthcare utilization.



# Thank You

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# Derivation Extra Analysis:

## Can patients with cognitive impairment accurately report abuse?

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### **Ability of Older Adults to Report Elder Abuse: An Emergency Department–Based Cross-Sectional Study**

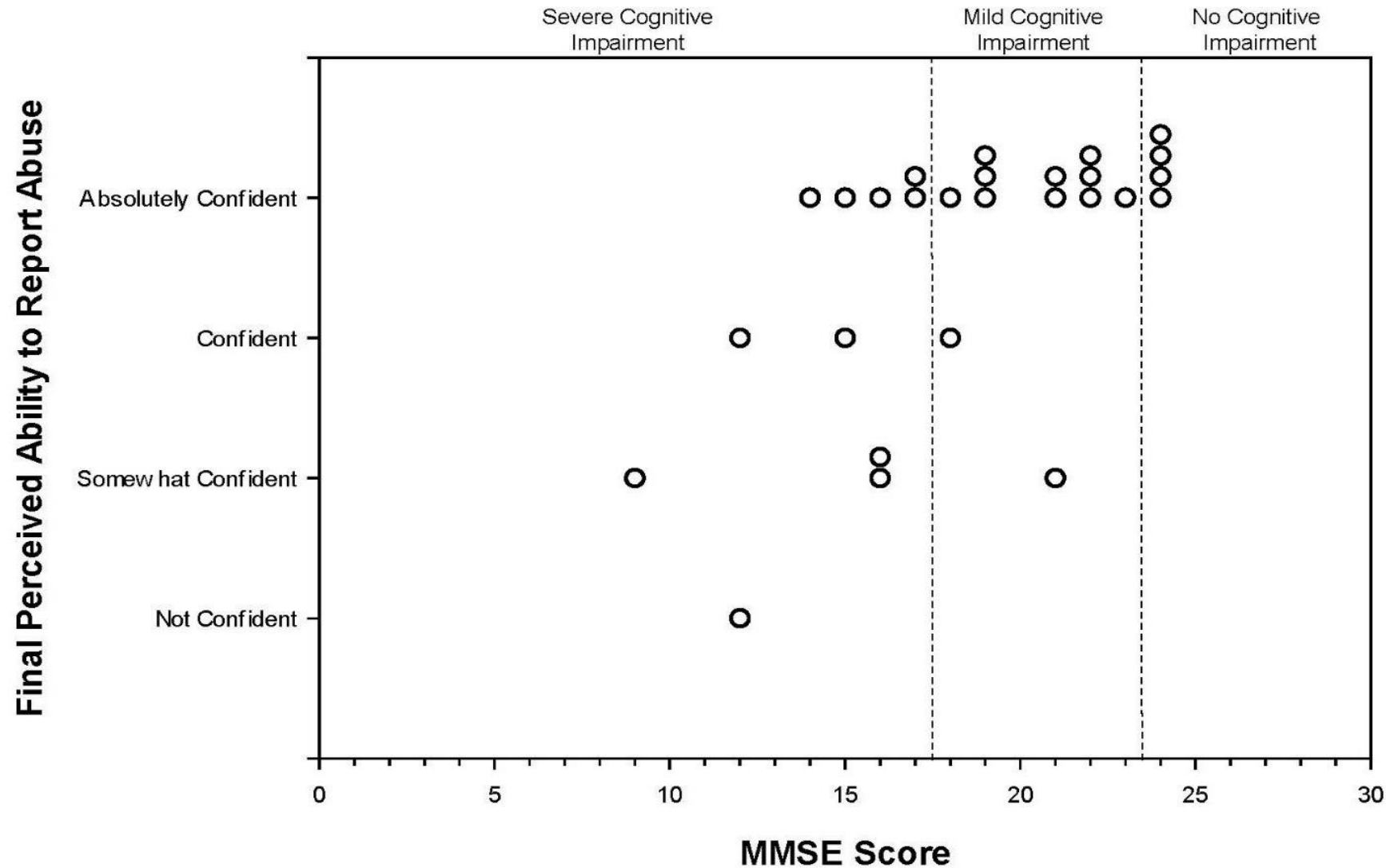
*Natalie L. Richmond, BS, Sheryl Zimmerman, PhD, Bryce B. Reeve, PhD, Joseph A. Dayaa, BA, Mackenzie E. Davis, BA, Samantha B. Bowen, BA, John A. Iasiello, BA, Rachel Stemerman, BA, Rayad B. Shams, BS, §Jason S. Haukoos, MD, MSc, Philip D. Sloane, MD, MPH, Debbie Travers, PhD, RN, Laura A. Mosqueda, MD, Samuel A. McLean, MD, MPA, and Timothy F. Platts-Mills, MD, MSc*

AGS 68:170-175, 2020 The

American Geriatrics Society

- Cognitive impairment is a significant risk factor for elder abuse
- Design: Secondary data analysis describing the patient's ability to report abuse during EA screening

Figure 1. Assessor confidence in patient ability to report abuse vs. Mini-Mental State Examination (n=27).





# Extra Results Derivation

## Interrater Reliability

**Supplemental Table 3.** Agreement of patient responses independently recorded by two assessors (N=125).

	% Agreement	Kappa
<b>Safety questions</b>		
Psy-1 Has anyone close to you threatened you or made you feel bad?	99	0.93
Psy-2 Have you been afraid of anyone?	100	1
Psy-3 Has anyone close to you called you names or put you down?	97	0.76
Psy-4 Has anyone told you that you give them too much trouble?	99	0.91
Psy-5 Have you been sad or lonely often?	94	0.87
Psy-6 Do you distrust anyone close to you?	98	0.89
Psy-7 Do you feel you need more privacy at home?	97	0.58
Neg-1 Is this person always there when you need them? <sup>a</sup>	97	0.92
Neg-2 Does this person always do what you need? <sup>a</sup>	97	0.79
Neg-3 Has anyone failed to give you the care you need to stay well?	98	0.90
Neg-4 Has anyone you count on for care giving let you down in terms of what you need to stay healthy?	99	0.88
Fin-1 Has anyone tried to force you to sign papers or use your money against your will?	100	1
Fin-2 Has anyone taken things that belong to you without your OK?	100	1
Ph-1 Has anyone close to you tried to hurt you or harm you?	100	1
RF-1 Does anyone close to you drink a lot?	98	0.91
<b>Suspicion of abuse</b>	100	1

a. These questions were asked to patients if they reported needing help and received help from someone in the past 6 months with activities including bathing, dressing, shopping, banking, and meals. N=85.

# Extra Results Derivation Table 1

**Table 3.** Predictive accuracy values for elder abuse questions and for combinations<sup>a</sup> of questions proposed for the final screening tool based on positive screens for suspicion of elder abuse (n=17). Psy: psychological; Neg: neglect; Fin: financial; Ph: physical; and RF: risk factor. PPV: positive predictive value; NPV: negative predictive value.

Single Questions	Sensitivity (%; 95% CI)	Specificity (%; 95% CI)	PPV (%; 95% CI)	NPV (%; 95% CI)
Psy-1 Has anyone close to you threatened you or made you feel bad? <sup>b</sup>	59 (33, 82)	96 (93, 98)	50 (27, 73)	97 (94, 99)
Psy-2 Have you been afraid of anyone? <sup>b</sup>	24 (7, 50)	99 (96, 100)	57 (18, 90)	95 (91, 97)
Psy-3 Has anyone close to you called you names or put you down? <sup>b</sup>	59 (33, 82)	97 (94, 99)	56 (31, 78)	97 (94, 99)
Psy-4 Has anyone told you that you give them too much trouble? <sup>c</sup>	38 (15, 65)	98 (96, 100)	60 (26, 88)	96 (93, 98)
Psy-5 Have you been sad or lonely often? <sup>c</sup>	75 (48, 93)	67 (61, 73)	13 (7, 22)	98 (94, 99)
Psy-6 Do you distrust anyone close to you? <sup>c</sup>	25 (7, 52)	93 (89, 96)	20 (6, 44)	95 (91, 97)
Psy-7 Do you feel you need more privacy at home? <sup>c</sup>	25 (7, 52)	97 (94, 99)	36 (11, 69)	95 (92, 97)
Neg-1 Is this person always there when you need them? <sup>d</sup>	50 (19, 81)	88 (78, 94)	36 (13, 65)	93 (84, 98)
Neg-2 Does this person always do what you need? <sup>d</sup>	30 (7, 65)	97 (91, 100)	60 (15, 95)	91 (83, 96)
Neg-3 Has anyone failed to give you the care you need to stay well? <sup>b</sup>	29 (10, 56)	96 (93, 98)	36 (13, 65)	95 (92, 97)
Neg-4 Has anyone you count on for caregiving let you down in terms of what you need to stay healthy? <sup>c</sup>	25 (7, 52)	98 (95, 99)	44 (14, 79)	95 (92, 97)
Fin-1 Has anyone tried to force you to sign papers or use your money against your will? <sup>b</sup>	12 (1, 36)	99 (97, 100)	50 (7, 93)	94 (90, 97)
Fin-2 Has anyone taken things that belong to you without your OK? <sup>c</sup>	44 (20, 70)	94 (90, 96)	32 (14, 55)	96 (93, 98)
Ph-1 Has anyone close to you tried to hurt you or harm you? <sup>b</sup>	24 (7, 50)	100 (98, 100)	100 (40, 100)	95 (91, 97)
RF-1 Does anyone close to you drink a lot of alcohol or use drugs? <sup>c</sup>	31 (11, 59)	93 (89, 96)	24 (8, 47)	95 (92, 98)
<b>Combinations: Hand selected, including all four domains</b>				
C1: Psy-1, Neg-3, Fin-1, Ph-1	76 (50, 93)	92 (88, 95)	41 (24, 59)	98 (96, 100)
C2: Psy-1, Neg-3, Fin-2, Ph-1	76 (50, 93)	88 (84, 92)	32 (18, 48)	98 (95, 99)
C3: Psy-1, Neg-4, Fin-1, Ph-1	65 (38, 86)	94 (90, 96)	42 (23, 63)	97 (94, 99)
C4: Psy-1, Psy-5, Neg-3, Fin-1, Ph-1	88 (64, 99)	64 (58, 70)	15 (8, 23)	99 (95, 100)
C5: Psy-4, Neg-3, Fin-1, Ph-1	76 (50, 93)	95 (91, 97)	52 (31, 72)	98 (96, 100)
C6: Psy-1, Psy-4, Neg-3, Fin-1, Ph-1	82 (57, 96)	92 (88, 95)	41 (25, 59)	99 (96, 100)
<b>Combinations: Classification and Regression Tree (CART) analysis</b>				
C7: Psy-3, Psy-4, Neg-1	88 (64, 99)	91 (87, 95)	42 (26, 59)	99 (97, 100)
<b>Combinations: Logistic regression</b>				
C8: Psy-3, Psy-4, Neg-1 <sup>e</sup>	88 (64, 99)	91 (87, 95)	42 (26, 59)	99 (97, 100)
C9: Psy-3, Psy-4, Psy-7, Neg-1, Neg-3 <sup>f</sup>	94 (71, 100)	87 (82, 91)	33 (20, 48)	100 (97, 100)
<b>Combinations: Logistic regression, modified</b>				
C10: Psy-1, Psy-3, Psy-4, Neg-1 <sup>g</sup>	94 (71, 100)	90 (86, 94)	40 (25, 57)	100 (97, 100)
C11: Psy-1, Psy-3, Psy-4, Neg-1, Fin-1, Ph-1 <sup>h</sup>	94 (71, 100)	90 (85, 93)	39 (24, 55)	100 (97, 100)

a. Predictive accuracy values for combinations of elder abuse questions are based on "suspicion of elder abuse" responses to either question in each combination.

b. N=259

c. N=258

d. These were asked if patients reported needing help and received help from someone in the past 6 months with activities including bathing, dressing, shopping, banking, and meals. N=85.

e. Stepwise logistic regression, p=0.1.

f. Stepwise logistic regression, p=0.2.

g. Modified C8 due to the fact that Neg-3, despite being identified by logistic regression (p=0.2), does not identify additional cases that C9 does not. Psy-7 replaced with Psy-1 due to low kappa for Psy-7 and no change in sensitivity and improved specificity with Psy-1.

h. Modified C10 in order to include the domains of elder abuse that C10 does not (financial and physical abuse)

# Extra Results

## Derivation Table 1

**Table 1.** Characteristics of study participants (n=259)

Characteristic	N(%)
Age, years	
65-74	141(54)
75-84	72(28)
≥85	46(18)
Female	155(60)
Race	
White	194(75)
Black	62(24)
American Indian	1(0.5)
Asian	2(0.5)
Hispanic ethnicity	3(1)
Education	
Less than high school	43(17)
High school graduate or GED	59(23)
Some college or technical degree	53(20)
College graduate	38(15)
Post-graduate education	66(25)
Living arrangement <sup>a</sup>	
Independent living	136(90)
Assisted living	7(5)
Nursing home	3(2)
Other	3(3)
AMT4 ≤3 <sup>b</sup>	25(10)
MMSE <sup>c</sup>	
Not assessed	234(90)
Mild impairment	11(4)
Moderate impairment	14(5)
Severe impairment	0(0)

a. N=222.

b. Abbreviated Mental Test-4, where scores <4 indicate impaired cognition.

c. Mini-Mental State Evaluation, administered to patients with AMT4 scores <4. Scores of 21-26 indicate mild impairment, 11-20 indicate moderate impairment, and <11 indicate severe impairment.

**Supplemental Table 1. Sources of elder abuse questions**

<b>Elder abuse questions used in predictive accuracy and reliability study</b>	<b>Source</b>
In the last 6 months, have you needed help with bathing, dressing, shopping, banking, or meals? a. If yes, have you had someone who helps you with this? b. If yes, is this person always there when you need them? c. Does this person always do what you need?	Have you relied on people for any of the following: bathing, dressing, shopping, banking, or meals? (Yaffe, et al., 2008)
In the last 6 months, has anyone tried to force you to sign papers or use your money against your will?	Has anyone tried to force you to sign papers or to use your money against your will? (Yaffe, et al., 2008)
In the last 6 months, has anyone close to you threatened you or made you feel bad?	Have you been upset because someone talked to you in a way that made you feel shamed or threatened? (Yaffe, et al., 2008)
In the last 6 months, has anyone close to you tried to hurt you or harm you?	Has anyone close to you tried to hurt or harm you recently? (Neale, Hwalek, Scott, Sengstock, & Stahl, 1991; M. J. Schofield and Mishra, 2003)
In the last 6 months, have you been afraid of anyone?	Are you afraid of anyone in your family? (M. J. Schofield and Mishra, 2003)
In the last 6 months, has anyone failed you give you the care you need to stay well?	Has anyone ever failed to help you take care of yourself when you needed help? (Aravanis et al., 1993)
In the last 6 months, has anyone close to you called you names or put you down?	Has anyone close to you called you names or put you down or made you feel bad recently? (M. J. Schofield and Mishra, 2003)
In the last 6 months, has anyone told you that you give them too much trouble?	Does anyone tell you that you give them too much trouble? (Neale, et al., 1991)
In the last 6 months, have you been sad or lonely often?	Are you sad or lonely often? (Neale, et al., 1991; M. J. Schofield and Mishra, 2003)
In the last 6 months, has anyone taken things that belong to you without your OK?	Has anyone taken things that belong to you without your OK? (Neale, et al., 1991; M. J. Schofield and Mishra, 2003)
Does anyone close to you drink a lot of alcohol or use drugs?	Does anyone in your family drink a lot? (Neale, et al., 1991)
Do you distrust anyone close to you?	Do you trust most of the people in your family? (Neale, et al., 1991; M. J. Schofield and Mishra, 2003)
Do you feel you need more privacy at home?	Do you have enough privacy at home? (Neale, et al., 1991; M. J. Schofield and Mishra, 2003)
In the last 6 months, has anyone you count of for caregiving let you down in terms of what you need to stay healthy?	Has anyone ever failed to help you take care of yourself when you needed help? (Aravanis, et al., 1993)

# Extra Results Sources of Elder Abuse Questions



# Extra

## Structured Social and Behavioral Evaluation

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Questions derived from the following validated instruments:

- Geriatric Mistreatment Scale
- Conflict Tactic Scale
- QUALCARE Scale
- Food Insecurity Access Scale
- Poverty assessment tool for primary care

Assessor were then asked to make a judgement about how likely it was the patient was being abused.