

Instrument	3-Minute Diagnostic Confusion Assessment Method NOTE: This card is populated with information from the instrument's original validation study only.
Acronym	3D-CAM
Primary use	Screening
Area assessed (Number of questions)	Addresses 4 core features: Acute onset or fluctuating course (feature 1); Inattention (feature 2); Disorganized thinking (feature 3); Altered level of consciousness (feature 4) 10 interview questions, 10 observational items, 2 supplementary questions
Description	A short interview and rating scale that uses verbal responses and observations by the rater to rate the Confusion Assessment Method (CAM) diagnostic algorithm. The clinical version includes skip patterns that can shorten the instrument, while the research version is designed for systematic case-finding for delirium in a research setting and does not include skip patterns.
Versions	2 (for clinical or research use)
Scoring information	Considered positive if 3 out of 4 features are present (features 1 and 2, and either 3 or 4), according to the original CAM diagnostic algorithm. Each of the 20 items pertains to a specific feature and is coded either yes/no or correct/incorrect.
Cognitive testing	Cognitive testing is embedded within the 3D-CAM interview.
Estimated time to rate	3 minutes
Require trained rater	Yes – can be trained lay raters or clinicians
Administer to	Patient, in-person
How to obtain	Detailed free instructions (registration required) at http://hospitalelderlifeprogram.org
Licensing Fee*	No charge for nonprofit or educational use
Languages available	English, Danish, Italian (clinical version only)
Highest COSMIN** rating	4/6†
Test Performance Characteristics	<p>Marcantonio 2014</p> <p><u>Reference standard</u>: diagnosis by clinical psychologists and practice nurses based on face-to-face interview, medical record review, input from nurse and family members, Montreal Cognitive Assessment (MoCA), Geriatric Depression Scale (GPS) and adjudicated by study panel using DSM-IV criteria</p> <ul style="list-style-type: none"> •Reliability (inter-rater agreement 95%) •Sensitivity (compared to reference standard, 95% [95% CI of 84-99%]) •Specificity (compared to reference standard, 94% [95% CI of 90-97%])

* Fees and licensing information is effective as of 2018, but is subject to change over time

** COSMIN is used to rate a study's evaluation of a survey or test's measurement properties. COSMIN does NOT rate the instrument itself, but helps readers understand if they can have confidence in the results of studies evaluating measurement properties of surveys and tests. For example, a rigorous study evaluating a test with poor measurement properties will receive a "good" COSMIN rating, while a poorly-conducted study evaluating a test with good measurement properties will receive a "poor" COSMIN rating. Small sample size can impact all COSMIN ratings. You must consider both the COSMIN rating and the results of studies provided when forming your opinion about that test. *COSMIN ratings shown are based solely on the instrument's original validation study.*

† COSMIN breakdown: content validity: GOOD, effect indicators: GOOD, internal consistency: NONE, inter-rater reliability: GOOD, construct validity: NONE, external validity: GOOD

Reference:

Marcantonio, E.R., Ngo, L.H., O'Connor, M., Jones, R.N., Crane, P.K., Metzger, E.D., Inouye, S.K. (2014). 3D-CAM: Derivation and Validation of a 3-Minute Diagnostic Interview for CAM-defined Delirium. *Annals of Internal Medicine*, 161(8), 554-561. doi:10.7326/M14-0865.

Last updated on **May 14, 2018**. If you are aware of any updates required for this document, please notify us via nidus@hsl.harvard.edu



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