



The Alzheimer's Association clinical practice guideline for the Diagnostic Evaluation, Testing, Counseling, and Disclosure of Suspected Alzheimer's Disease and Related Disorders (DETeCD-ADRD)^{1,2}

Core Elements of Evaluation of Patient with Suspected Cognitive Impairment

CORE 1

Establish shared goals for diagnostic process with patient and care partner.

CORE 2

History of Present Illness from Patient and Care Partner

CORE 3

Structured Multi-Domain Systems Review

- Cognitive
- Behavior/ Neuropsychiatric
- Activities of Daily Living
- Sensorimotor

CORE 4

Biopsychosocial History & Risk Factors

- Risk Factors for Neurodegenerative and Cerebrovascular Diseases
- Other risk factors for cognitive or behavioral symptoms
- Developmental, social, family history
- Health Related Behaviors

CORE 5

Exam

- Mental Status Exam using Validated instrument³
- Medical
- Neurologic
- Psychiatric

CORE 6

Diagnostic Steps and Formulation

STEP 1 : Delineate Cognitive Functional Status

- Cognitively Unimpaired
- Subjective Cognitive Decline
- Mild Cognitive Impairment
- Dementia (Mild, Moderate, Severe, Terminal)

STEP 2 : Characterize Cognitive-Behavioral Syndrome

- (Syndromic Diagnosis e.g. primary memory (amnesic), language (aphasic, etc.)

STEP 3 : Determine likely cause(s) (Etiological Diagnosis)

- (e.g. Alzheimer's disease, Vascular, etc) and potential contributing factors (e.g., medications or medical conditions)

CORE 7

Communicate diagnostic findings and implications to patient and care partner. Develop shared care plan.

Evaluation of Patient with Suspected Cognitive Impairment

 Tap on clinical practice setting type to know the respective recommended diagnostic evaluation process.

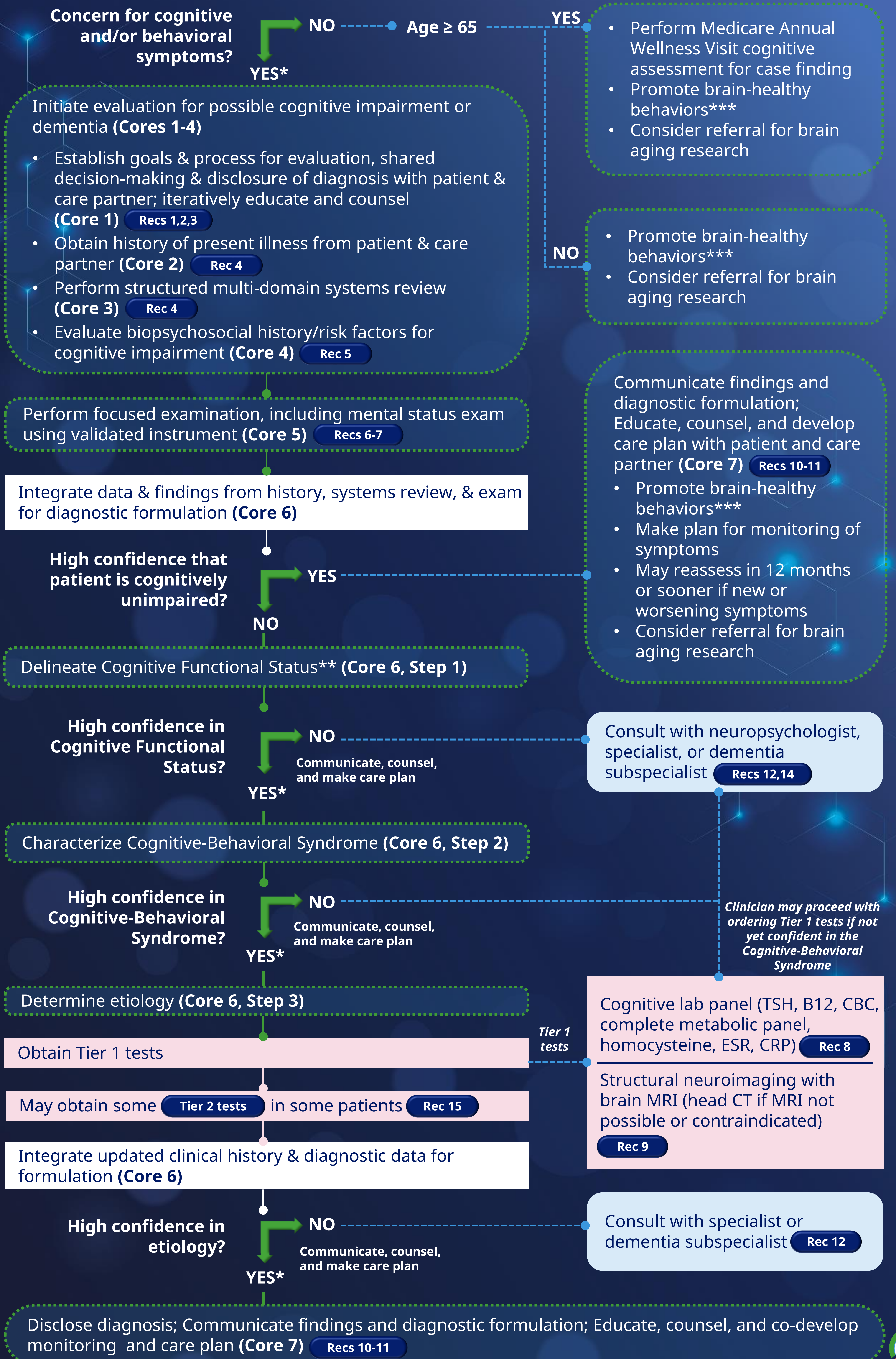
Primary Care Setting

Specialist Setting

Dementia Sub-specialist Setting

Evaluation of Patient With Suspected Cognitive Impairment Primary Care Setting

Tap on the **dark blue buttons** to see the respective recommendations



■ Provider action
 ■ Intermediate step
 ▶ Decision point
 ■ Consultation/referral
 ■ Tests

Recs 1-19

***Consider triage at any step (Rec 12) if there is suspicion that patient has early onset, atypical, and/or rapidly progressive dementia.**

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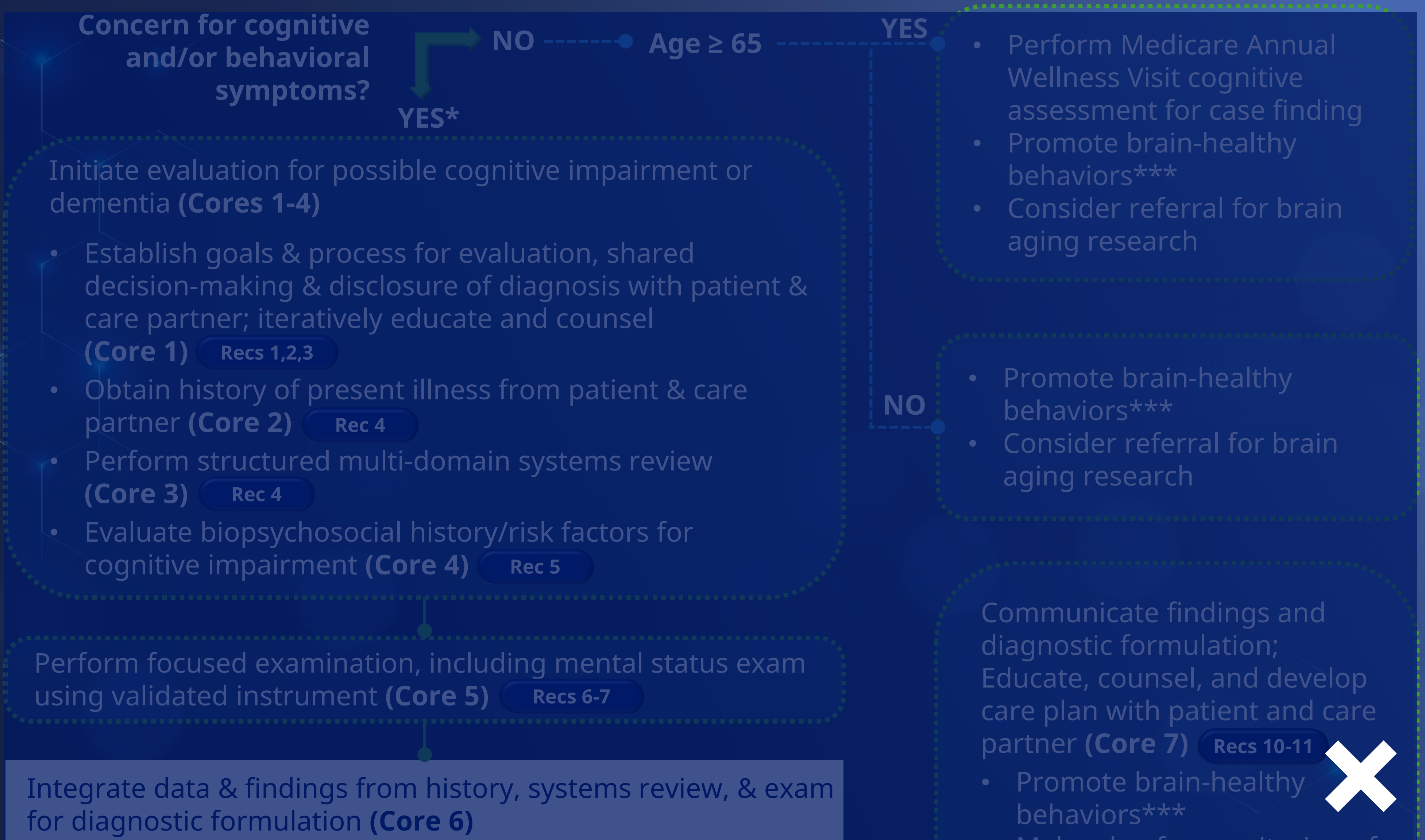
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Evaluation of Patient With Suspected Cognitive Impairment Primary Care Setting

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- **RECOMMENDATION 1:** For patients who self-report or whose care partner or clinician reports cognitive, behavioral, or functional changes, the clinician should initiate a multitiered evaluation focused on the problem.
- **RECOMMENDATION 2:** The clinician should use patient-centered communication to develop a partnership with the patient or with the patient and a care partner to (1) establish shared goals for the evaluation process and (2) assess capacity (understanding and appreciation) to engage in the goal-setting process for the evaluation.
- **RECOMMENDATION 3:** The evaluation process should use tiers of assessments and tests based on individual presentation, risk factors, and profile to establish a diagnostic formulation, including (1) the overall level of impairment, (2) the cognitive-behavioral syndrome, and (3) the likely cause(s) and contributing factors.



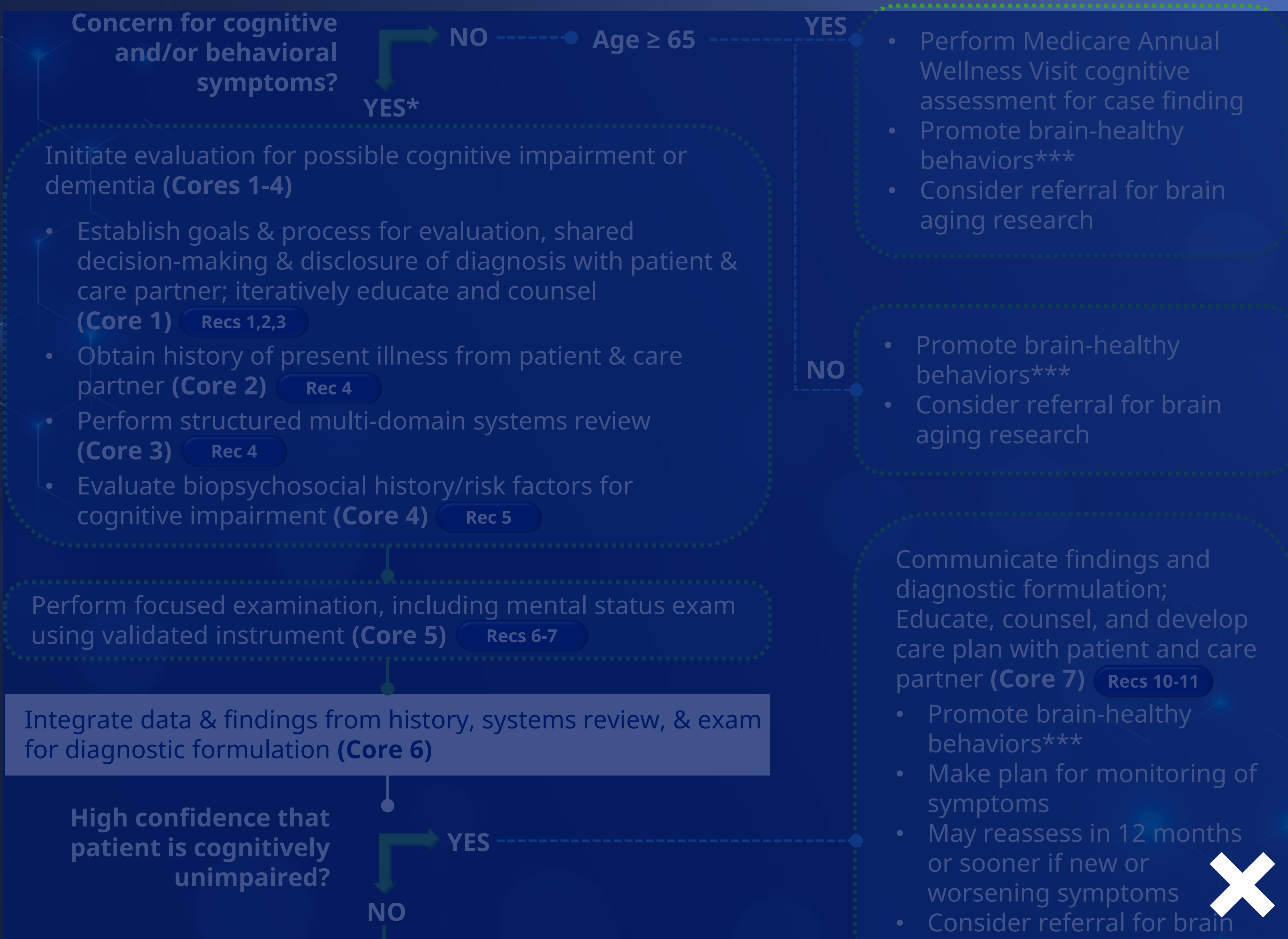
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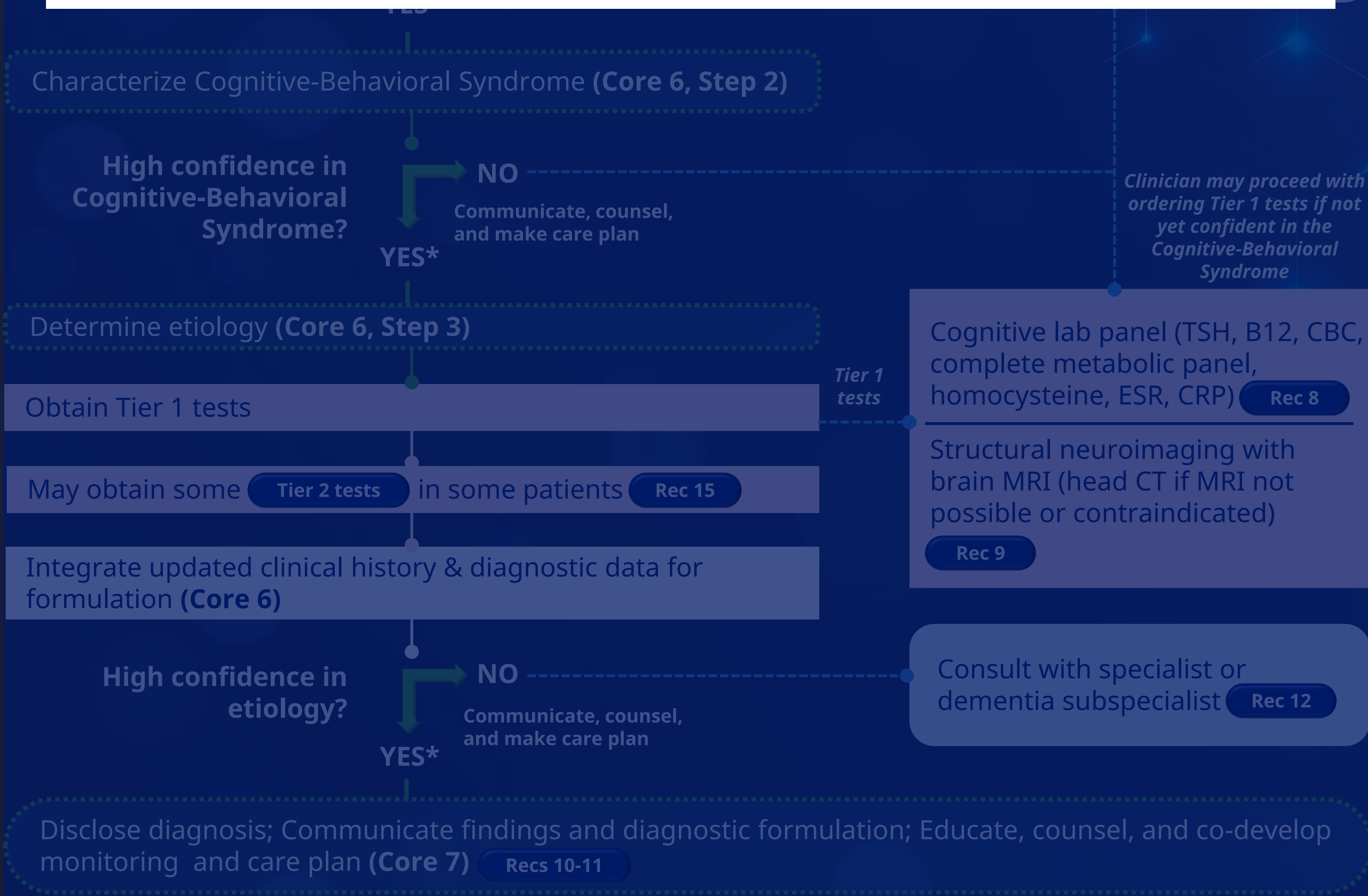


Evaluation of Patient With Suspected Cognitive Impairment Primary Care Setting

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• **RECOMMENDATION 4:** During history taking for a patient being evaluated for cognitive or behavioral symptoms, the clinician should obtain reliable information involving an informant regarding changes in (1) cognition, (2) activities of daily living (ADL and instrumental ADL [IADL]), (3) mood and other neuropsychiatric symptoms, and (4) sensory and motor function. Use of structured instruments for assessing each of these domains is helpful.



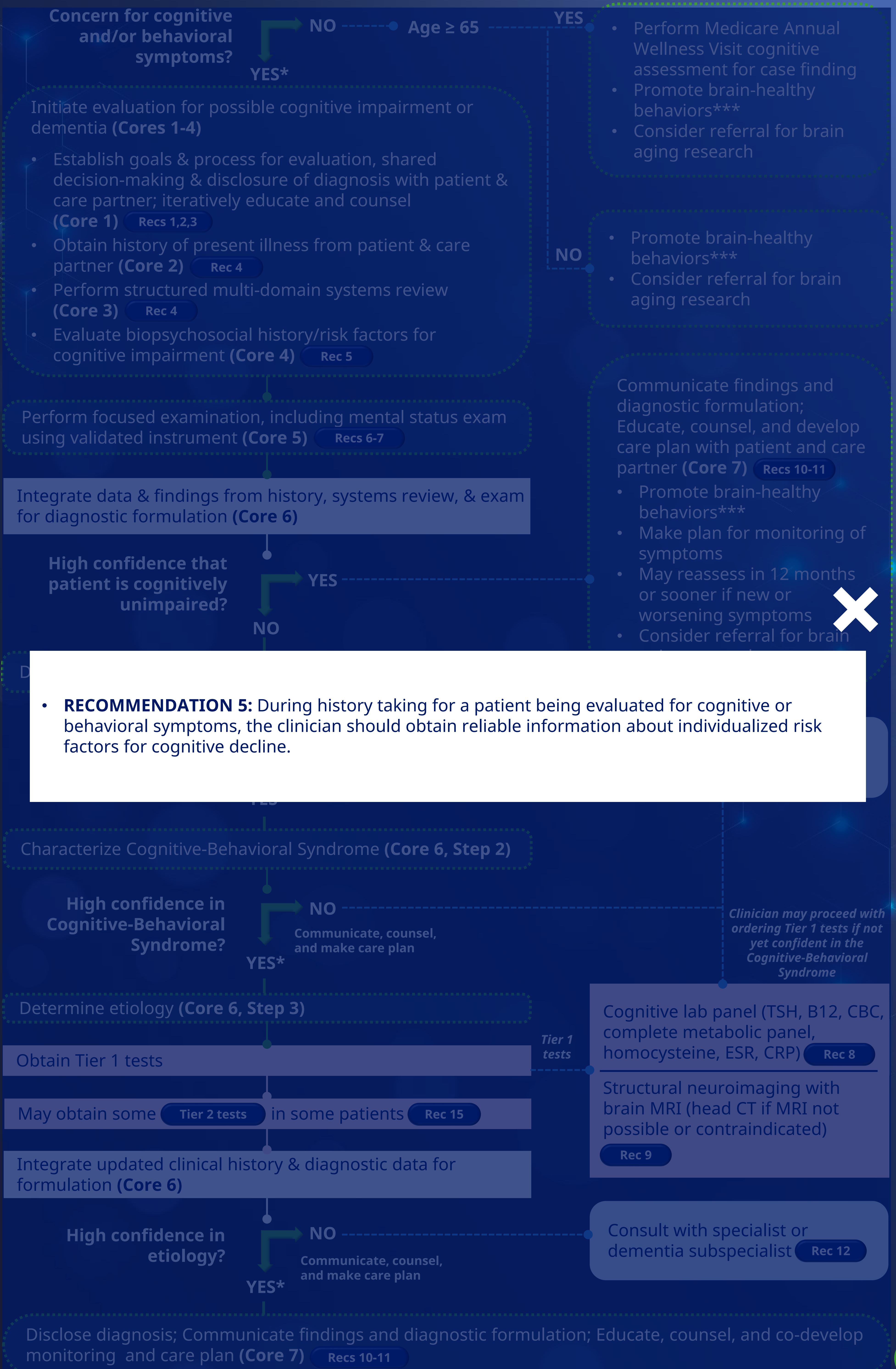
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• **RECOMMENDATION 5:** During history taking for a patient being evaluated for cognitive or behavioral symptoms, the clinician should obtain reliable information about individualized risk factors for cognitive decline.

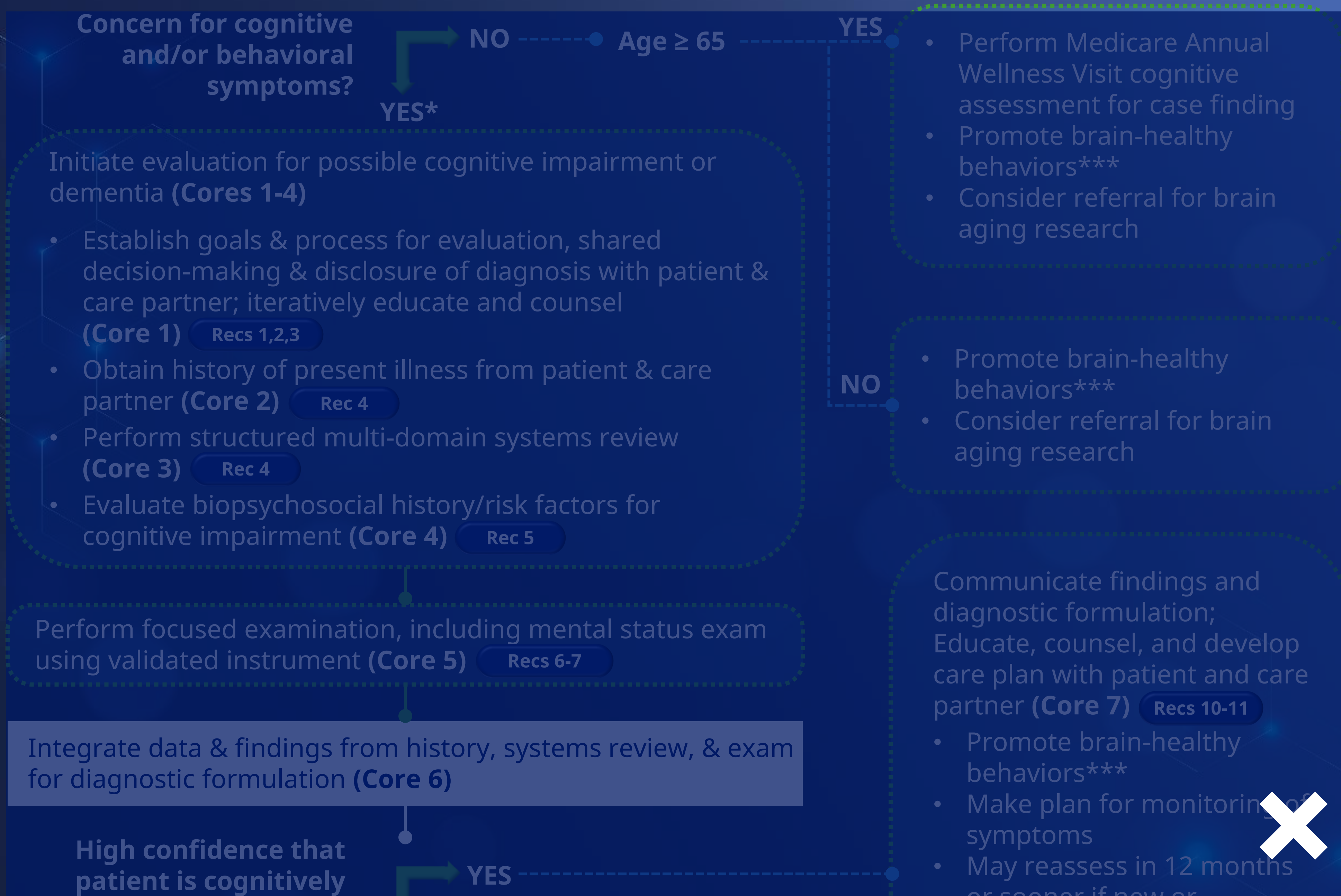
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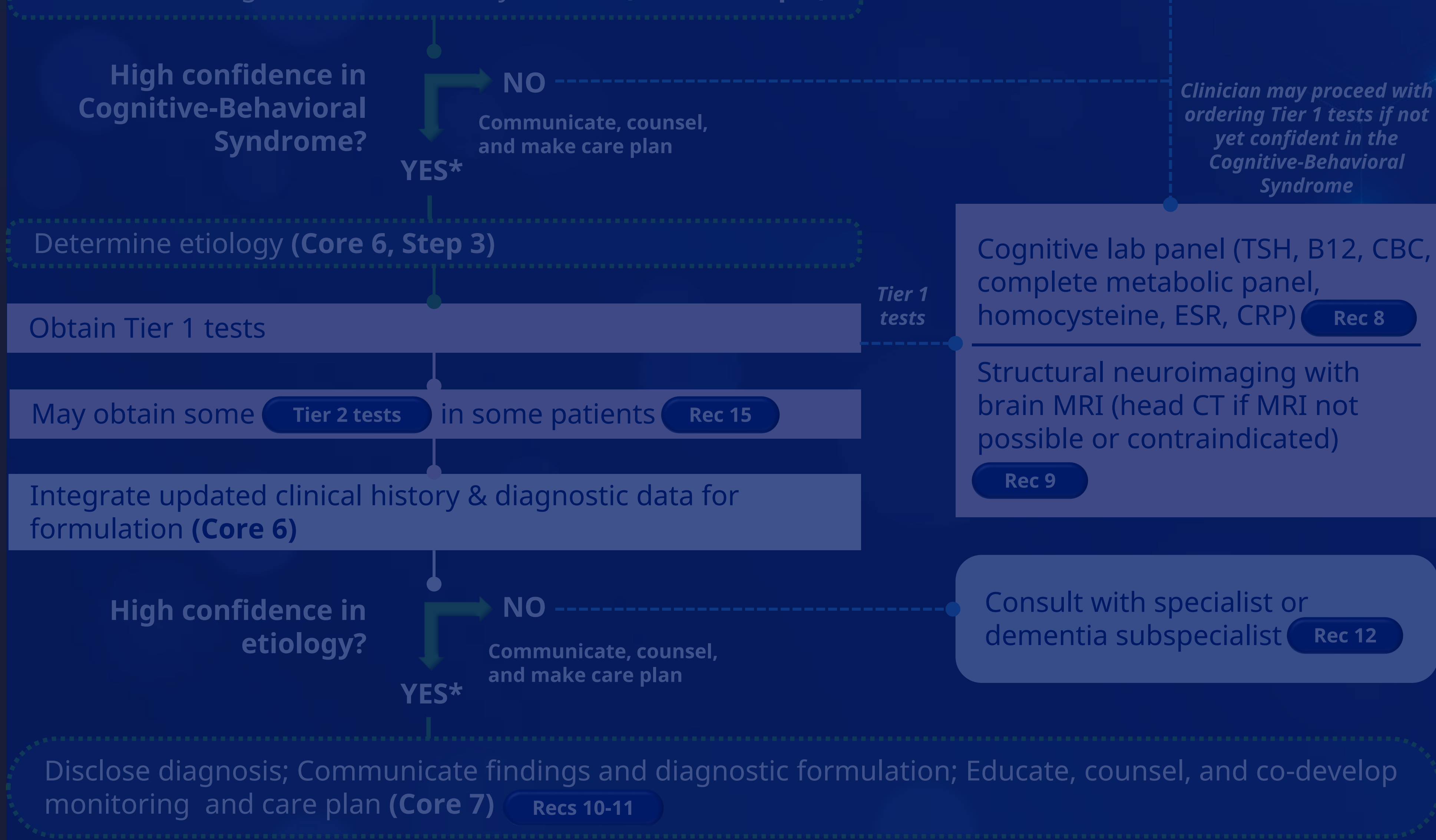


Evaluation of Patient With Suspected Cognitive Impairment Primary Care Setting

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- **RECOMMENDATION 6:** In a patient being evaluated for cognitive or behavioral symptoms, the primary clinician should perform an examination of cognition, mood, and behavior (mental status exam), and a dementia-focused neurologic examination, aiming to diagnose the cognitive-behavioral syndrome.
- **RECOMMENDATION 7:** In a patient being evaluated for cognitive or behavioral symptoms, clinicians should use validated tools to assess cognition.



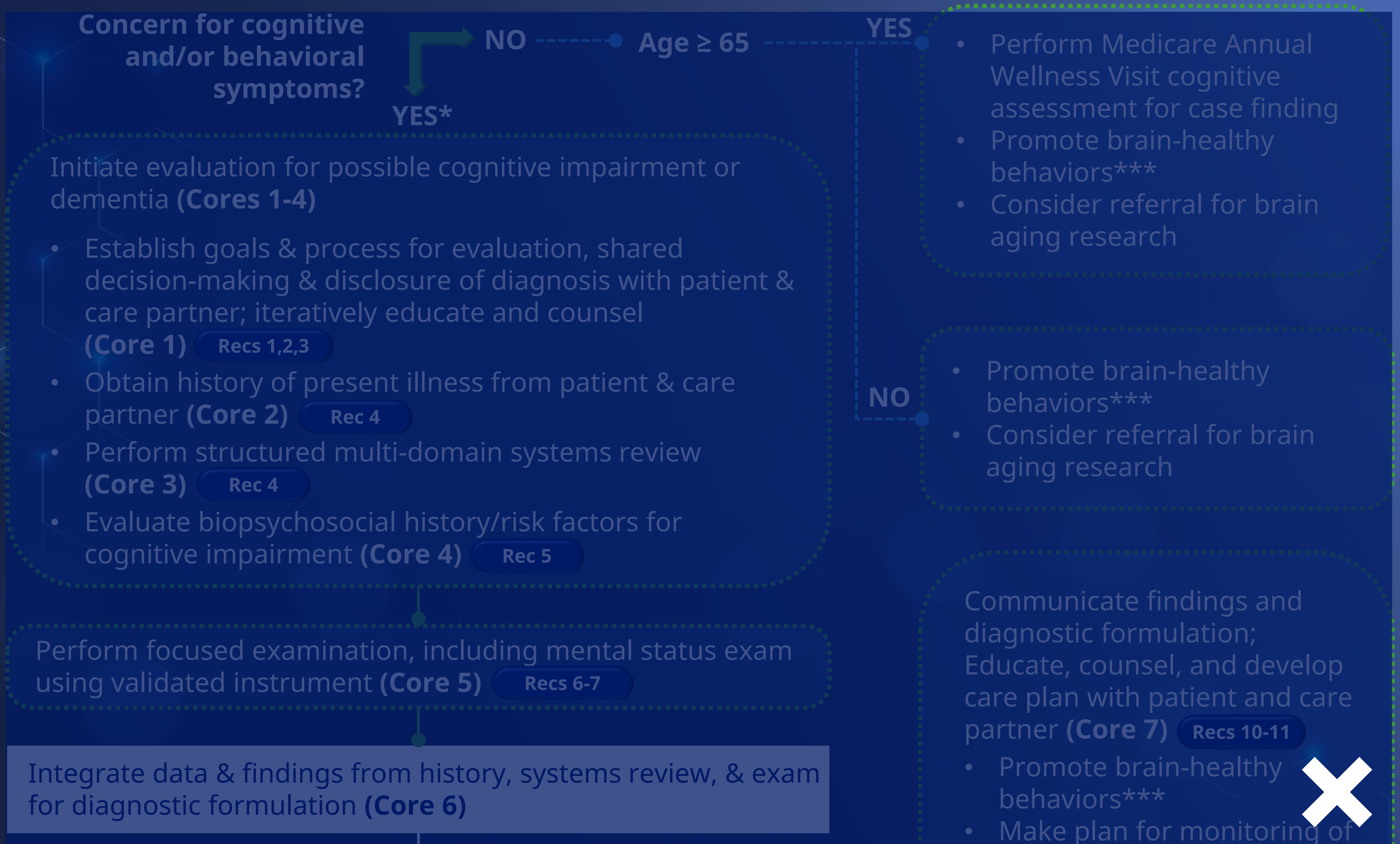
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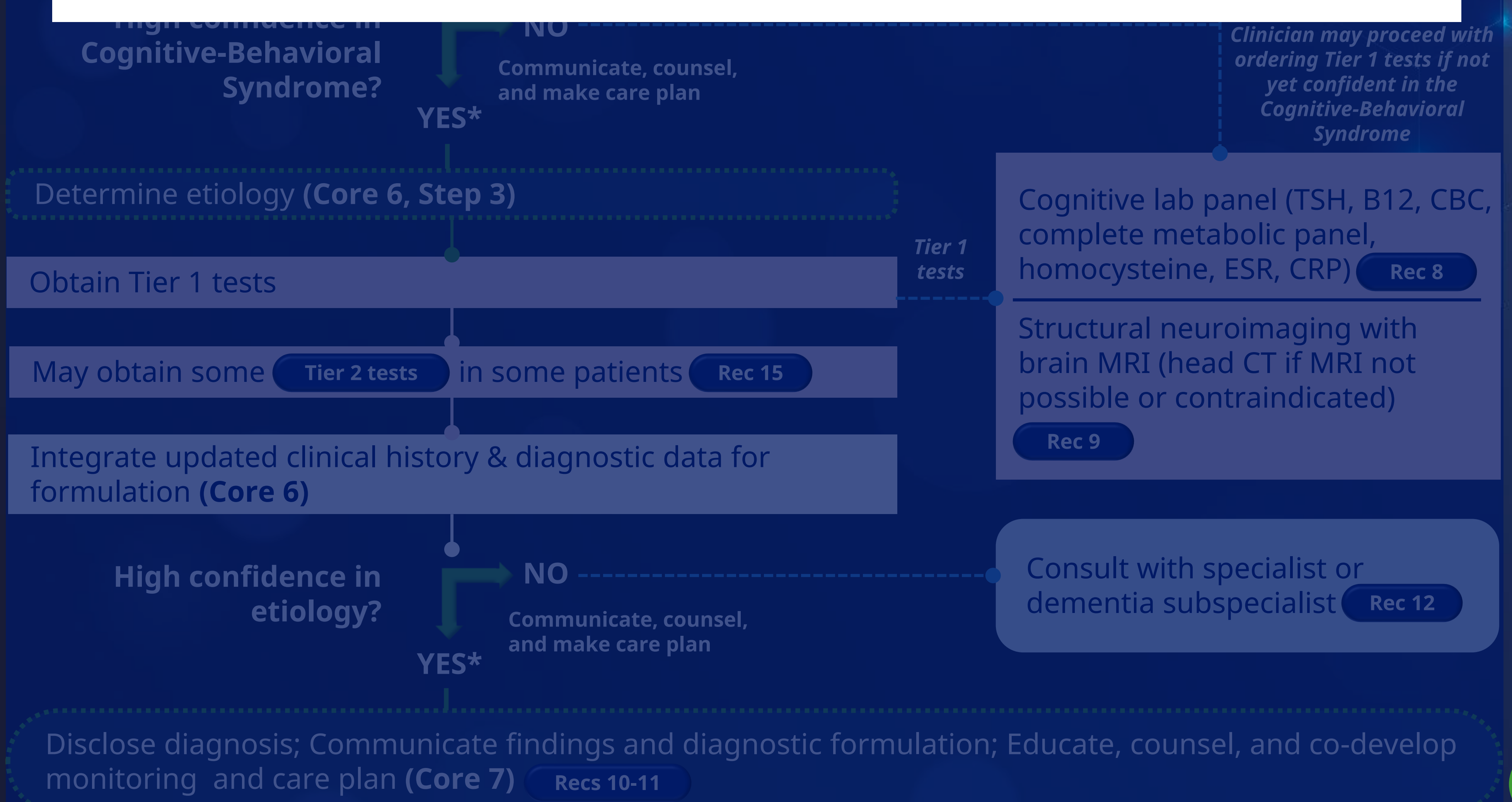


Evaluation of Patient With Suspected Cognitive Impairment Primary Care Setting

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- **RECOMMENDATION 10:** Throughout the evaluation process, the clinician should establish a dialogue with the patient and care partner about the understanding (knowledge of facts) and appreciation (recognition that facts apply to the person) of the presence and severity of the cognitive-behavioral syndrome. The patient and care partner's understanding and appreciation of the syndrome guide education, diagnostic disclosure, and methods for communicating and documenting diagnostic findings.
- **RECOMMENDATION 11:** In communicating diagnostic findings the clinician should honestly and compassionately inform both the patient and their care partner of the following information using a structured process: the name, characteristics, and severity of the cognitive-behavioral syndrome; the disease(s) likely causing the cognitive-behavioral syndrome; the stage of the disease; what can be reasonably expected in the future; treatment options and expectations; potential safety concerns; and medical, psychosocial and community resources for education, care planning and coordination, and support services.



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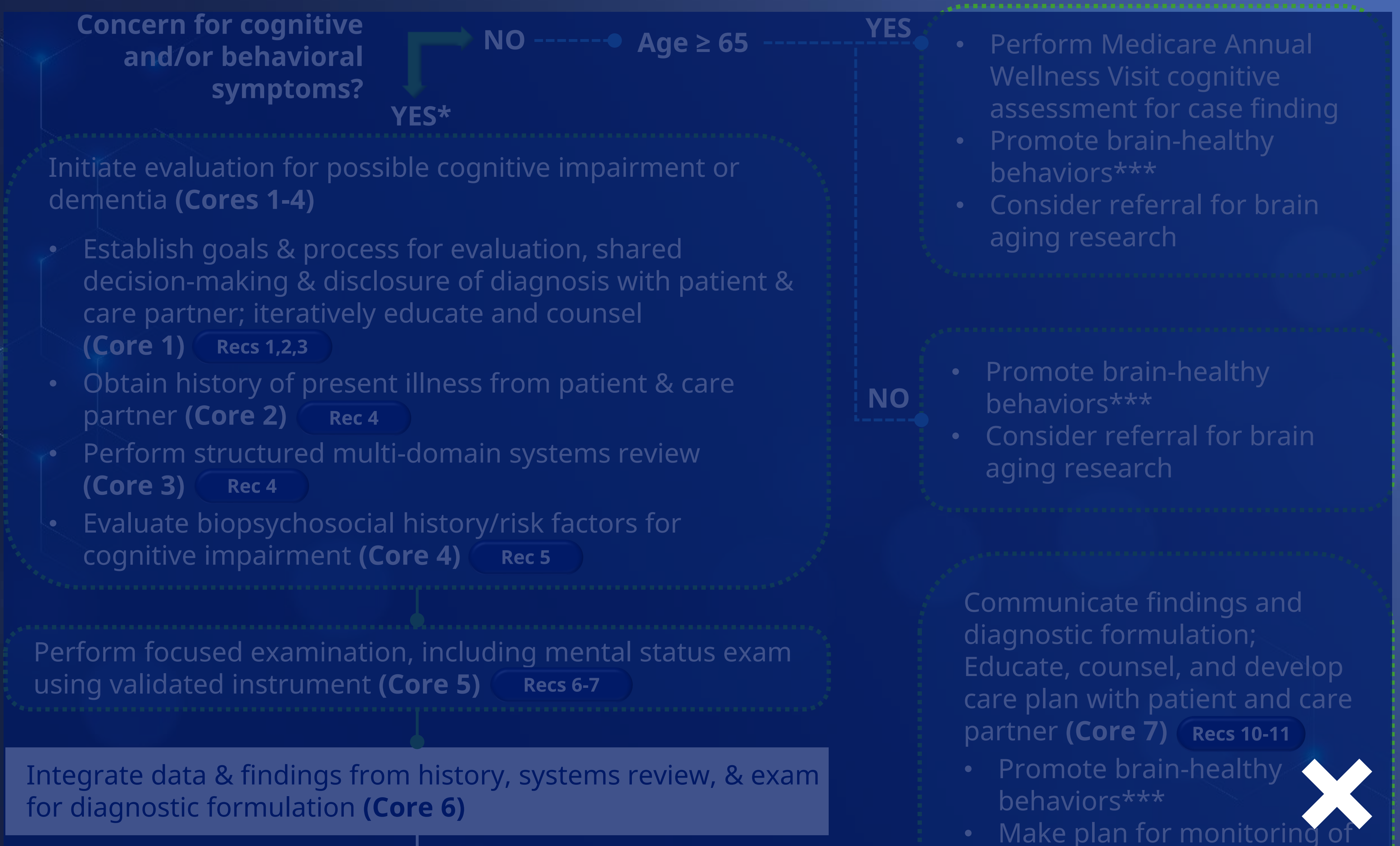
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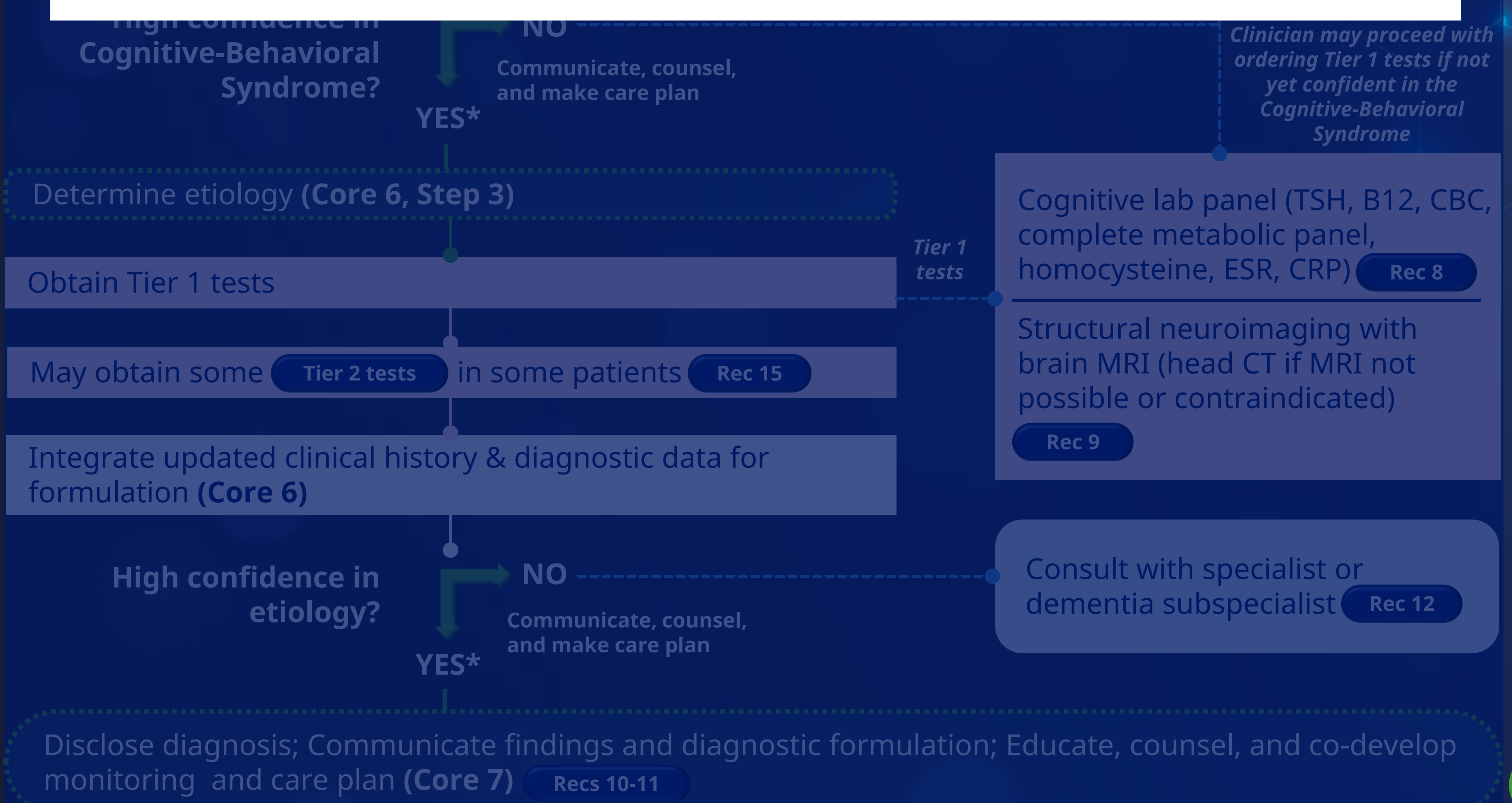


Evaluation of Patient With Suspected Cognitive Impairment Primary Care Setting

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- **RECOMMENDATION 12:** A patient with atypical findings or in whom there is uncertainty about how to interpret the evaluation, or that is suspected of having an early-onset or rapidly progressive cognitive-behavioral condition, should be further evaluated expeditiously, usually including referral to a specialist.
- **RECOMMENDATION 14:** Neuropsychological evaluation is recommended when office-based cognitive assessment is not sufficiently informative. Specific examples are when a patient or caregiver report concerning symptoms in daily life, but the patient performs within normal limits on a cognitive examination, or when the examination of cognitive-behavioral function is not normal but there is uncertainty about interpretation of results due to a complex clinical profile or confounding demo-graphic characteristics. The neuropsychological evaluation, at a minimum, should include normed neuropsychological testing of the domains of learning and memory (in particular delayed free and cued recall/recognition); attention, executive function, visuospatial function, and language.



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Evaluation of Patient With Suspected Cognitive Impairment Primary Care Setting

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• **RECOMMENDATION 8:** Laboratory tests in the evaluation of cognitive or behavioral symptoms should be multi-tiered and individualized to the patient’s medical risks and profile. Clinicians should obtain routine Tier 1 laboratory studies in all patients.

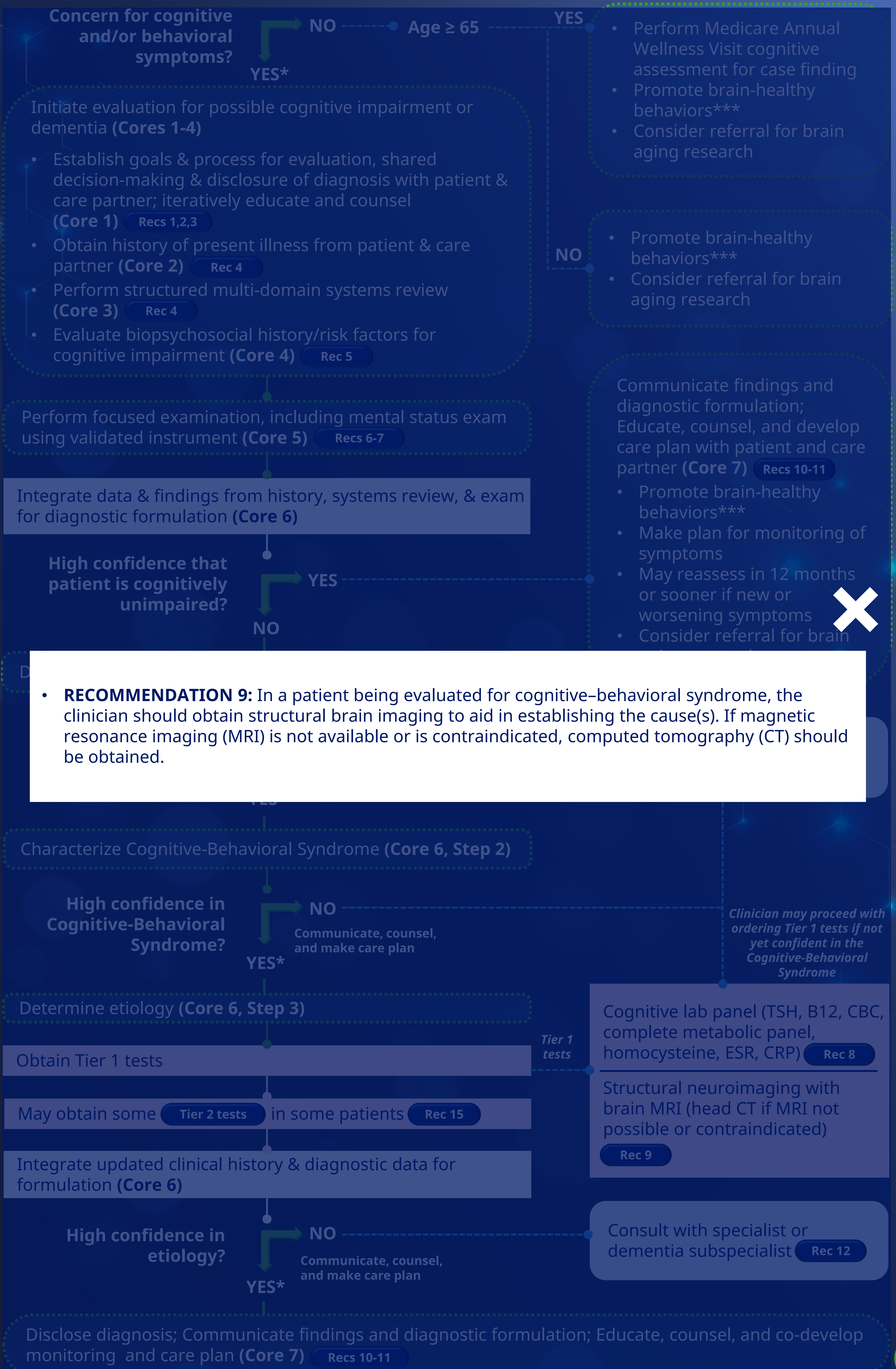
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• **RECOMMENDATION 9:** In a patient being evaluated for cognitive-behavioral syndrome, the clinician should obtain structural brain imaging to aid in establishing the cause(s). If magnetic resonance imaging (MRI) is not available or is contraindicated, computed tomography (CT) should be obtained.

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Evaluation of Patient With Suspected Cognitive Impairment Primary Care Setting

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Clinician may proceed with ordering Tier 1 tests if not yet confident in the Cognitive-Behavioral Syndrome

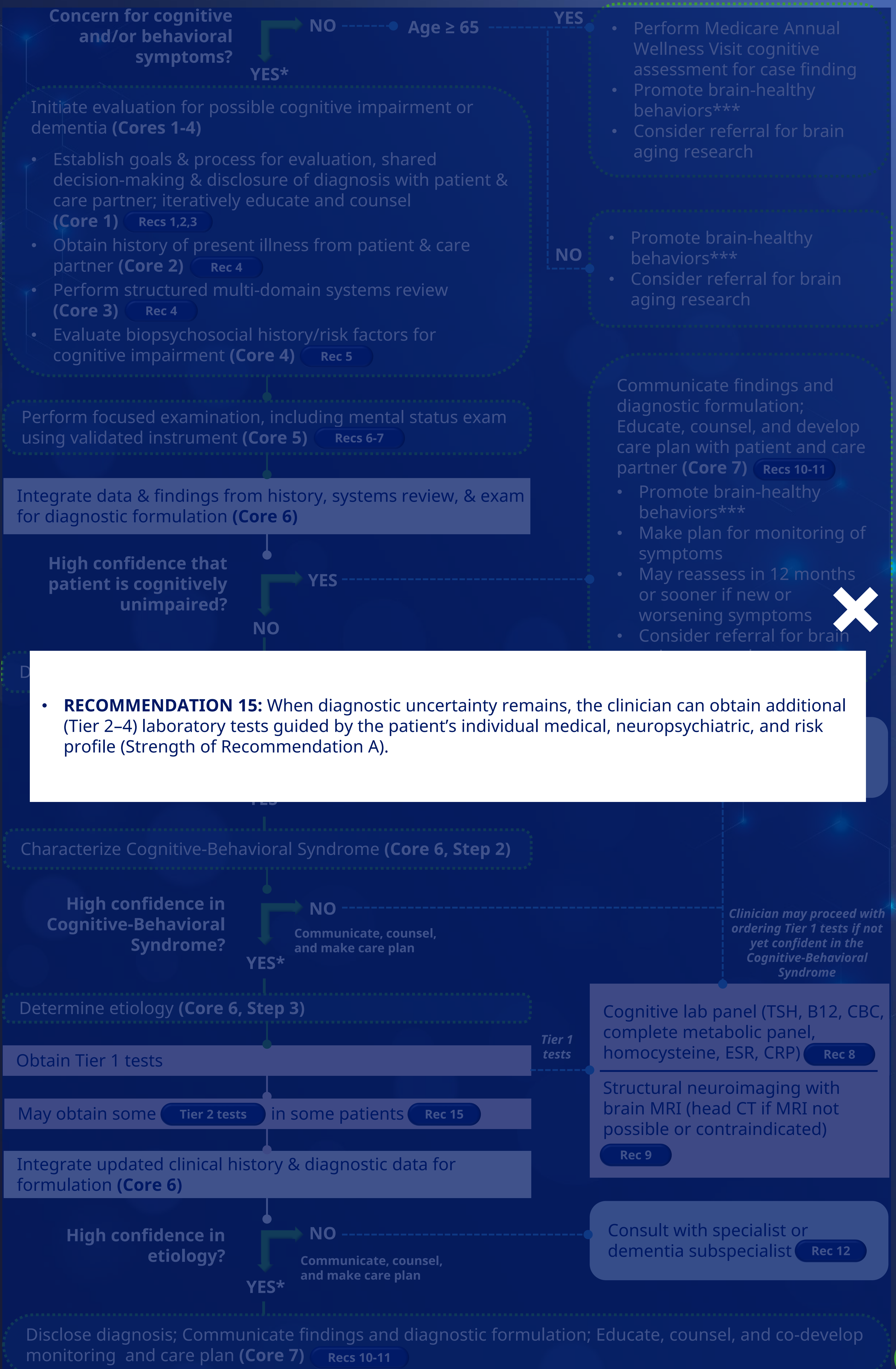
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Evaluation of Patient With Suspected Cognitive Impairment Primary Care Setting

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• **RECOMMENDATION 15:** When diagnostic uncertainty remains, the clinician can obtain additional (Tier 2–4) laboratory tests guided by the patient’s individual medical, neuropsychiatric, and risk profile (Strength of Recommendation A).

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Evaluation of Patient with Suspected Cognitive Impairment Specialist Setting: General Neurology, Psychiatry, Geriatrics

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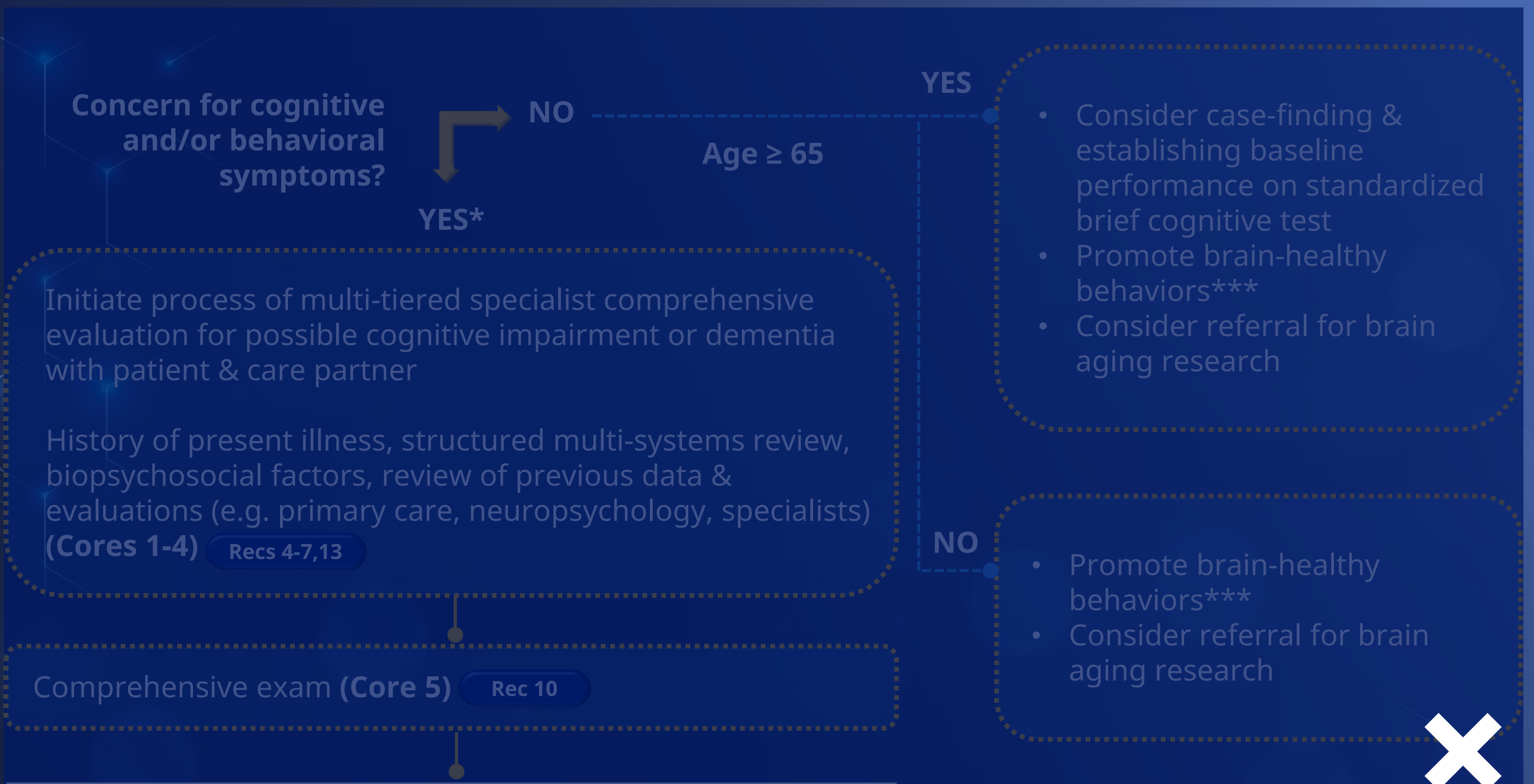
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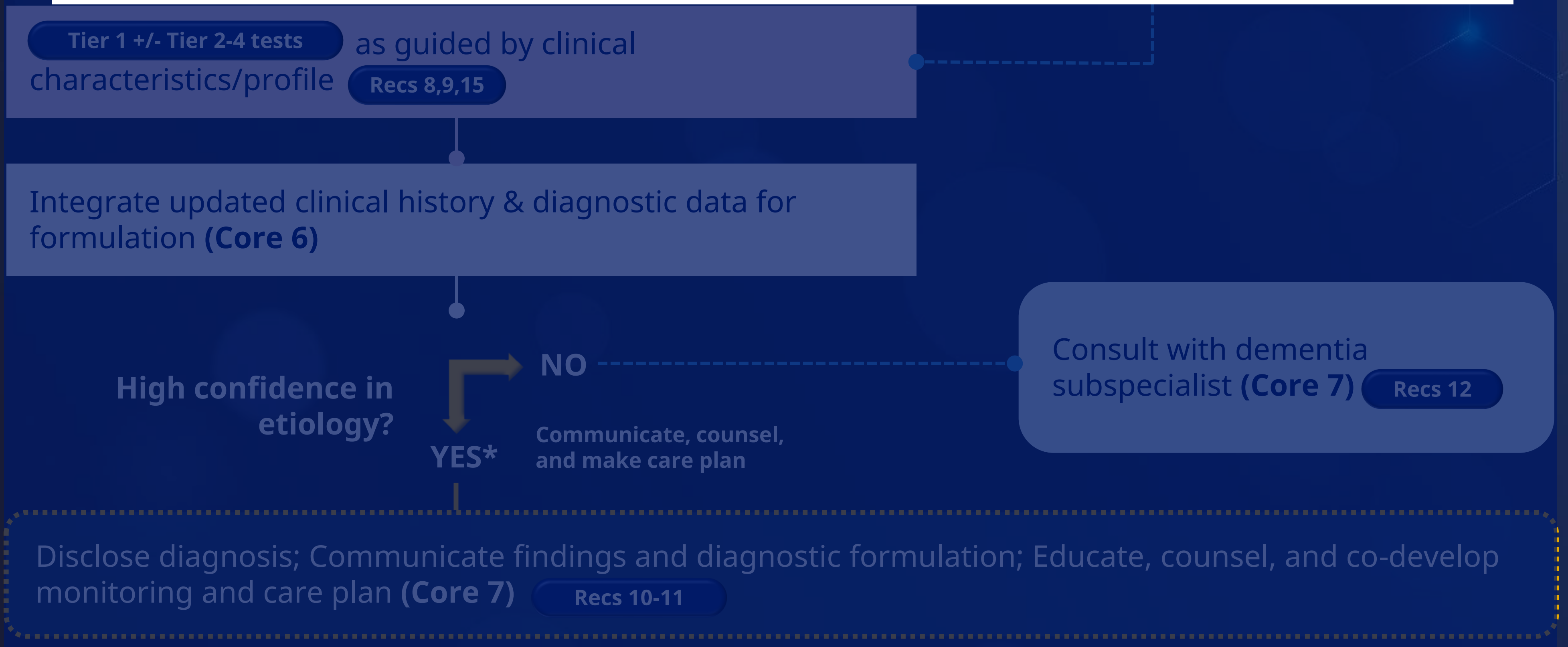
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Evaluation of Patient with Suspected Cognitive Impairment Specialist Setting: General Neurology, Psychiatry, Geriatrics

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- **RECOMMENDATION 7:** In a patient being evaluated for cognitive or behavioral symptoms, clinicians should use validated tools to assess cognition.
- **RECOMMENDATION 13:** A specialist evaluating a patient with cognitive or behavioral symptoms should perform a comprehensive history and office-based examination of cognitive, neuropsychiatric, and neurologic functions, aiming to diagnose the cognitive-behavioral syndrome and its cause(s).

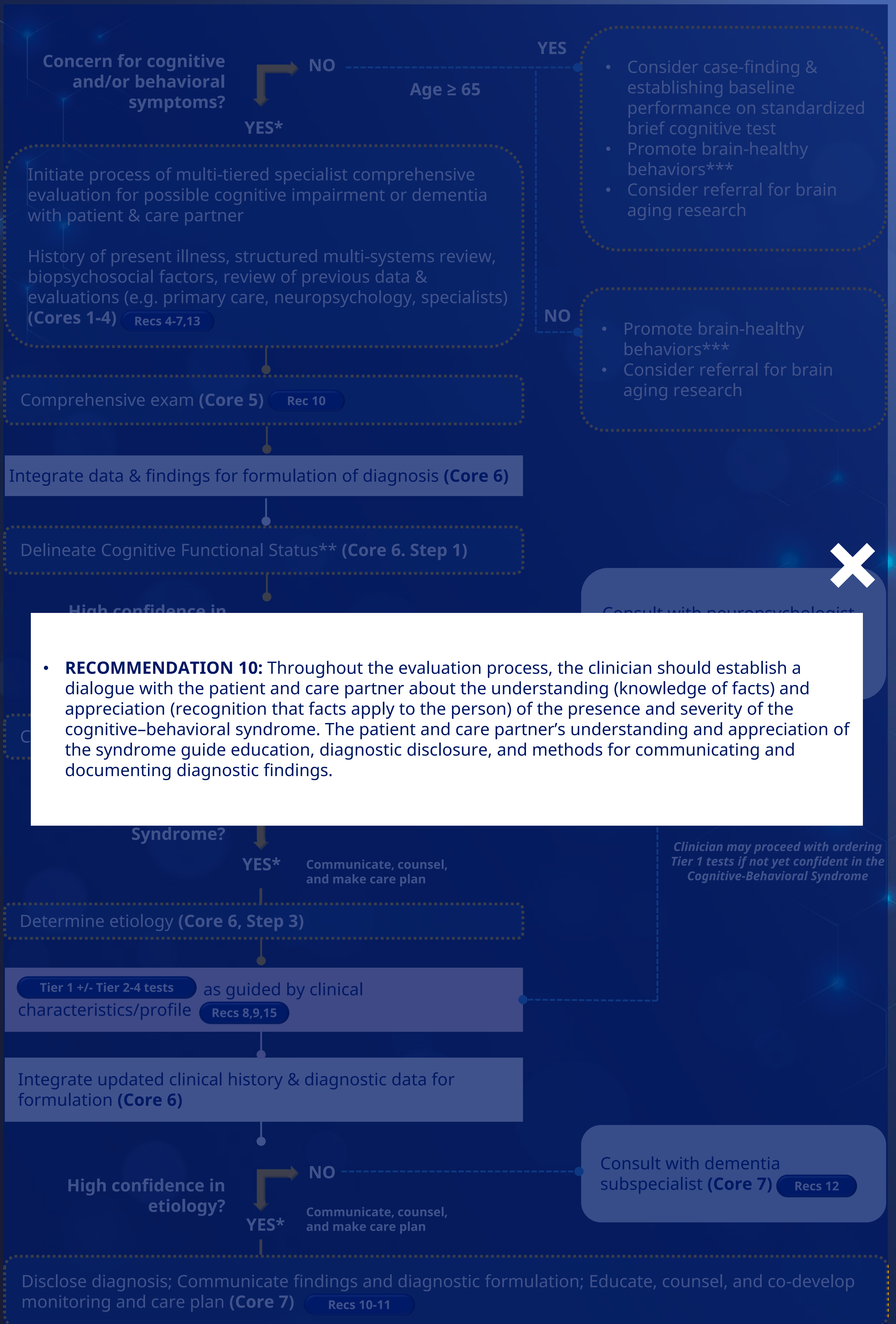


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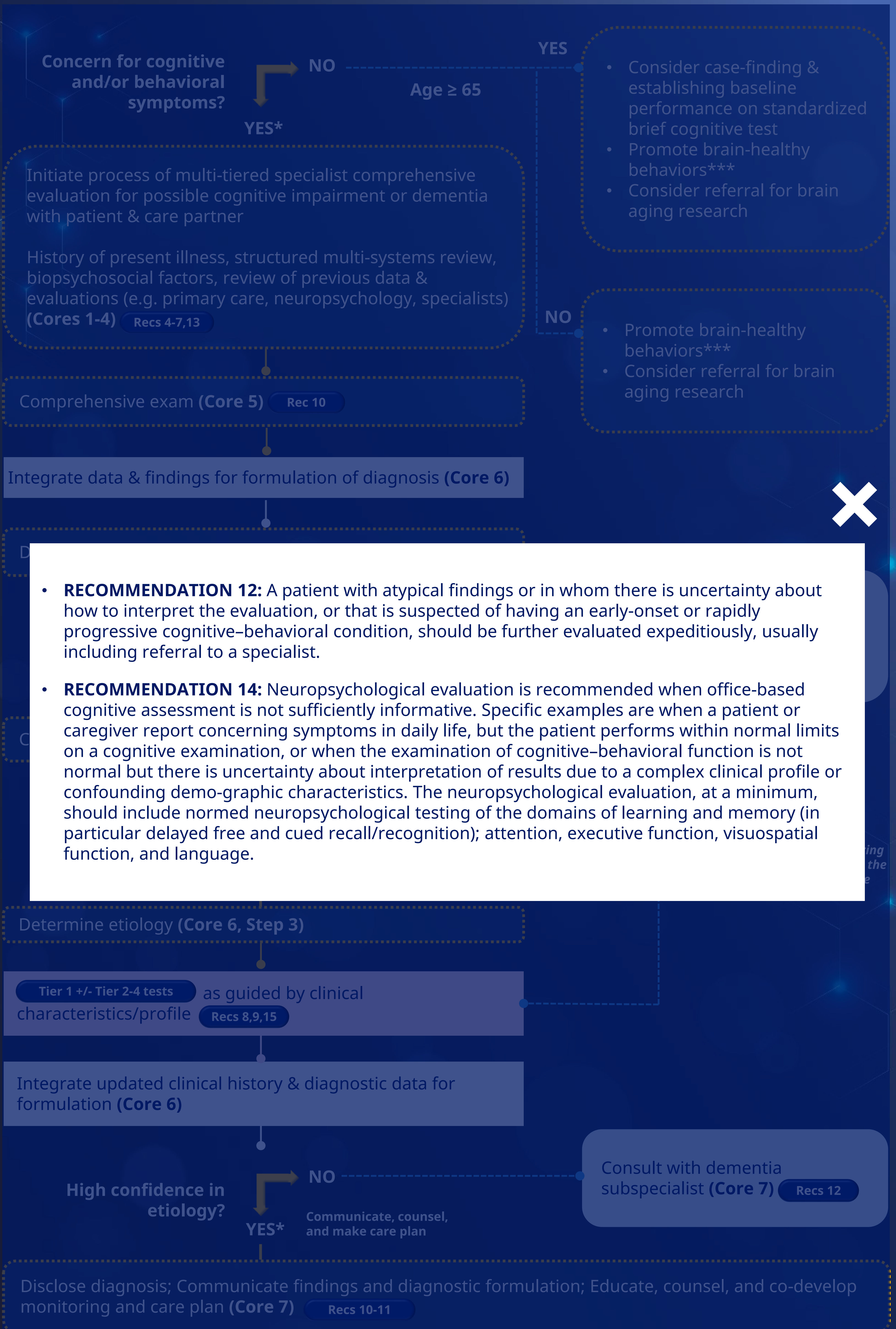
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Evaluation of Patient with Suspected Cognitive Impairment Specialist Setting: General Neurology, Psychiatry, Geriatrics

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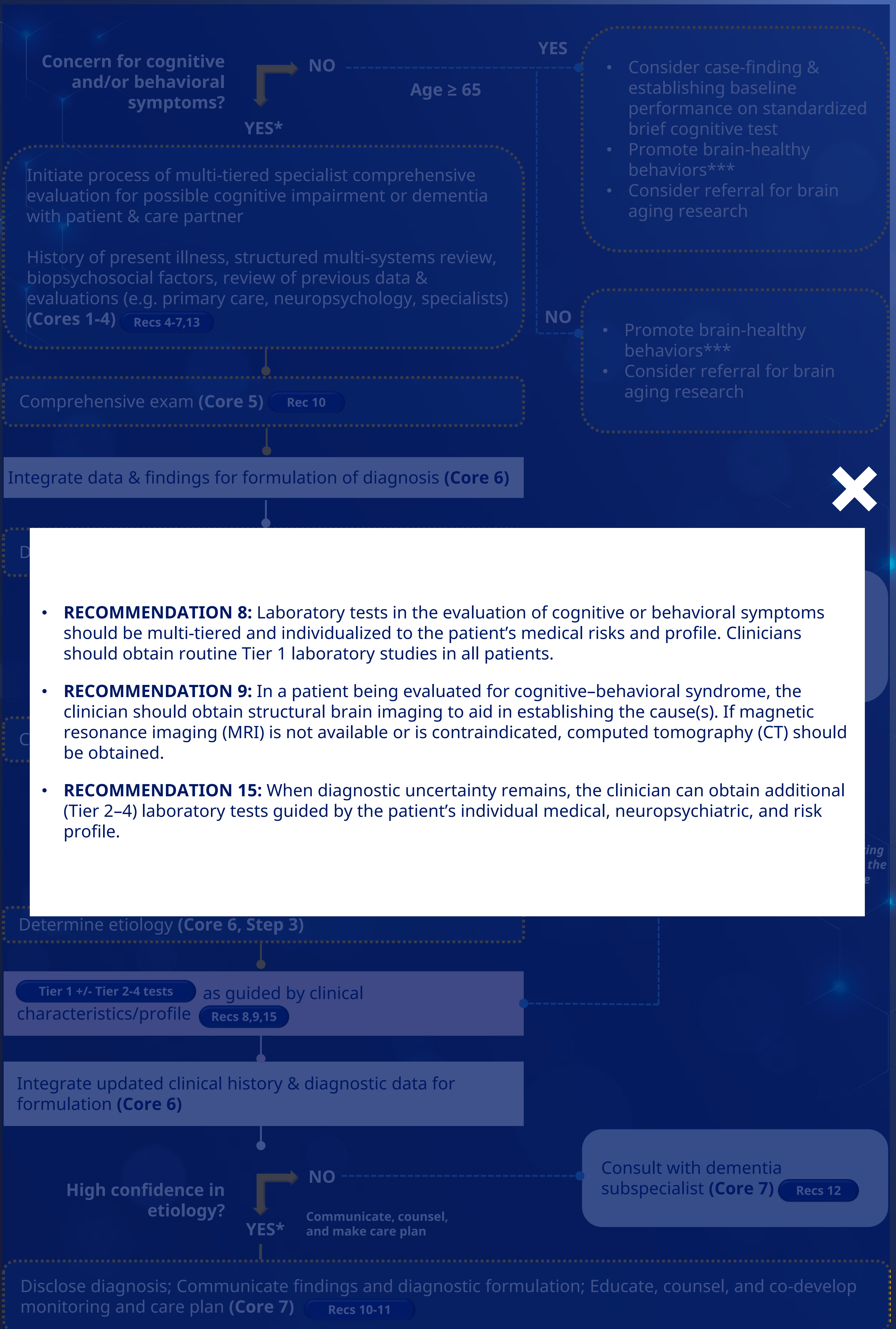
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- **RECOMMENDATION 15:** When diagnostic uncertainty remains, the clinician can obtain additional (Tier 2-4) laboratory tests guided by the patient's individual medical, neuropsychiatric, and risk profile.

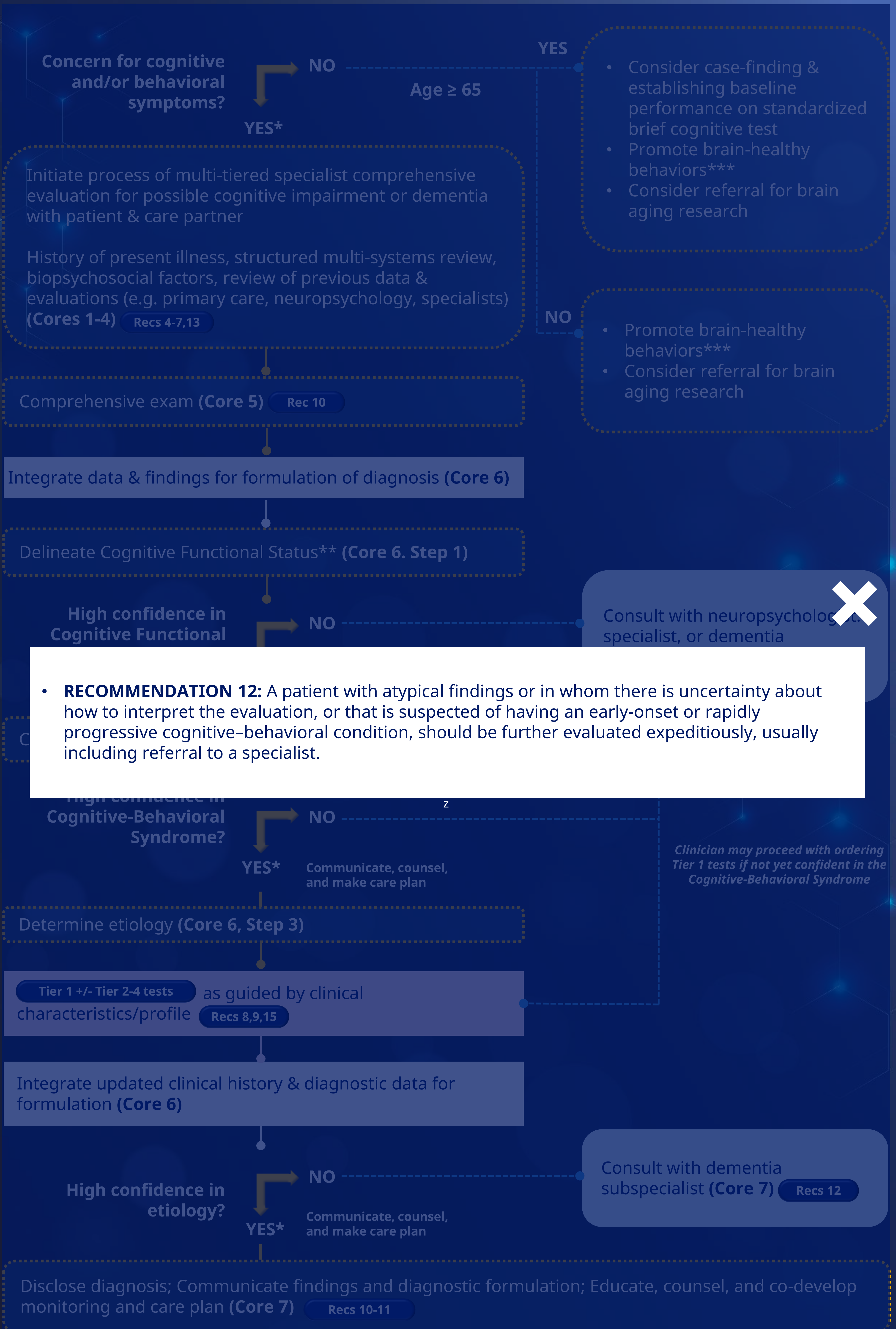
Provider action ■ Intermediate step ▢ Decision point ■ Consultation/referral ■ Tests Recs 1-19

*Consider triage at any step (Rec 12) if there is suspicion that patient has early onset, atypical, and/or rapidly progressive dementia.
 **Subjective Cognitive Decline, Mild Cognitive Impairment, dementia, other (delirium, encephalopathy, or other conditions).
 ***Non-smoking status, physical activity at goal levels, body mass index < 25 kg/m², healthy diet consistent with current guidelines, untreated blood pressure < 120/< 80 mmHg, total cholesterol < 200 mg/dL, and fasting blood glucose < 100 mg/dL; pursuit of cognitively stimulating and rewarding activities; screening & evaluation for obstructive sleep apnea & excessive alcohol use.
 Abbreviations: Rec, recommendation.
 References: Atri A et al. *Alzheimer's Dement.* 2024;1-32; Dickerson BC et al. *Alzheimer's Dement.* 2024;1-29.



Evaluation of Patient with Suspected Cognitive Impairment Specialist Setting: General Neurology, Psychiatry, Geriatrics

Tap on the **dark blue buttons** to see the respective recommendations



• **RECOMMENDATION 12:** A patient with atypical findings or in whom there is uncertainty about how to interpret the evaluation, or that is suspected of having an early-onset or rapidly progressive cognitive-behavioral condition, should be further evaluated expeditiously, usually including referral to a specialist.

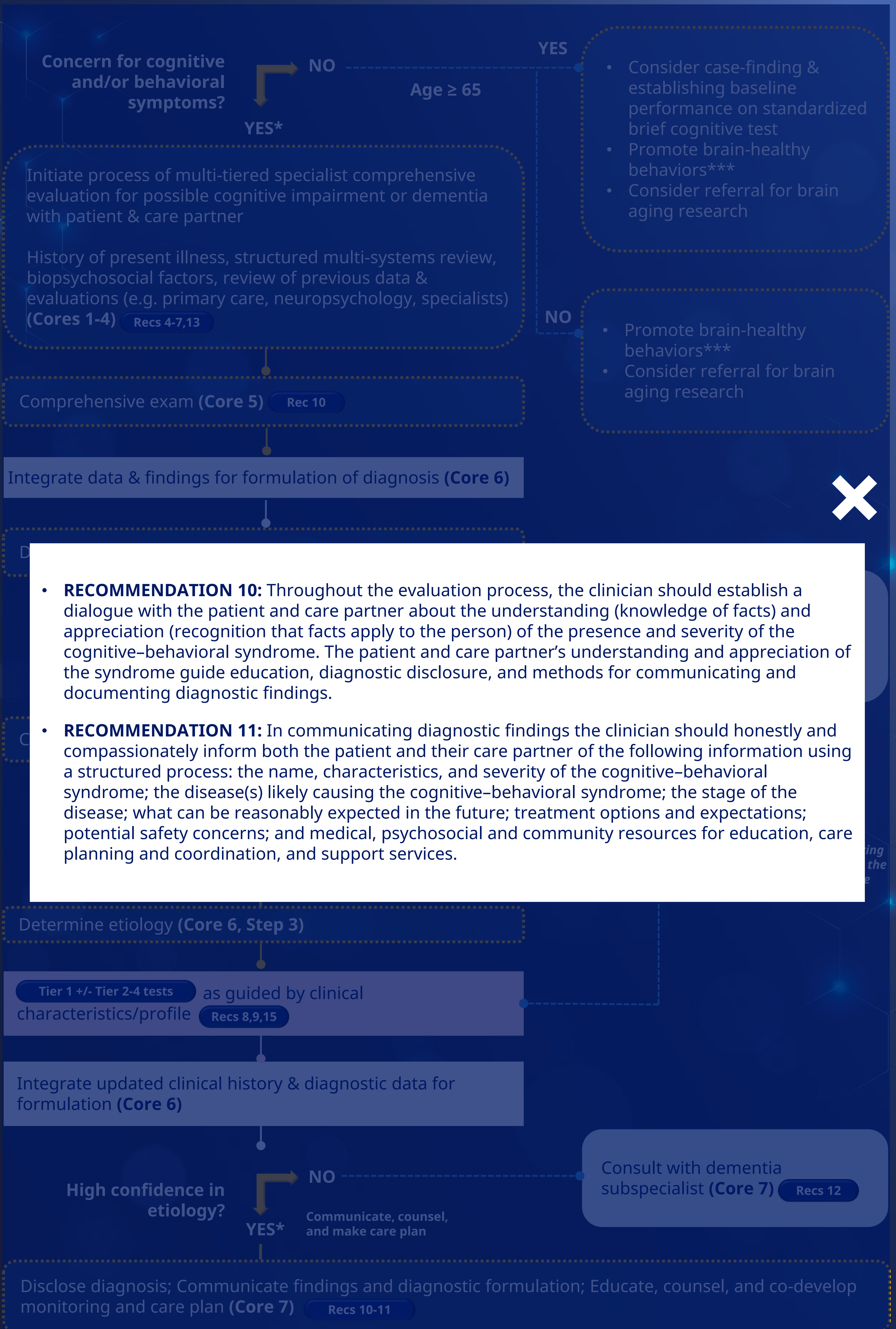
■ Provider action
 ■ Intermediate step
 ■ Decision point
 ■ Consultation/referral
 ■ Tests
 Recs 1-19

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Evaluation of Patient with Suspected Cognitive Impairment Specialist Setting: General Neurology, Psychiatry, Geriatrics

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RECOMMENDATION 10: Throughout the evaluation process, the clinician should establish a dialogue with the patient and care partner about the understanding (knowledge of facts) and appreciation (recognition that facts apply to the person) of the presence and severity of the cognitive-behavioral syndrome. The patient and care partner's understanding and appreciation of the syndrome guide education, diagnostic disclosure, and methods for communicating and documenting diagnostic findings.

RECOMMENDATION 11: In communicating diagnostic findings the clinician should honestly and compassionately inform both the patient and their care partner of the following information using a structured process: the name, characteristics, and severity of the cognitive-behavioral syndrome; the disease(s) likely causing the cognitive-behavioral syndrome; the stage of the disease; what can be reasonably expected in the future; treatment options and expectations; potential safety concerns; and medical, psychosocial and community resources for education, care planning and coordination, and support services.

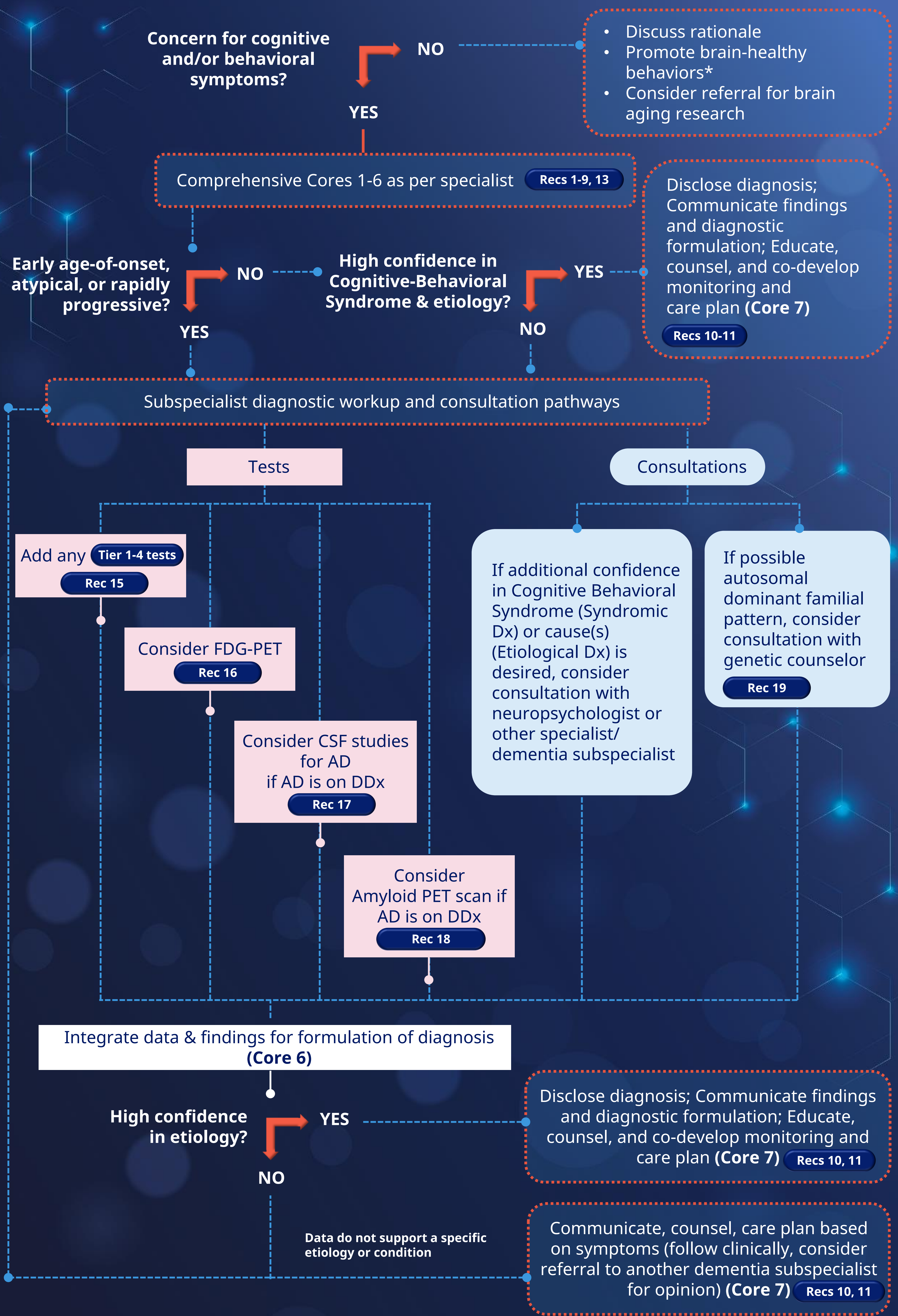
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Evaluation of Patient with Suspected Cognitive Impairment Dementia Subspecialist Setting

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■ Provider action
 ■ Intermediate step
 ■ Decision point
 ■ Consultation/referral
 ■ Tests

Recs 1-19

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Evaluation of Patient with Suspected Cognitive Impairment Dementia Subspecialist Setting

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- **RECOMMENDATION 1:** For patients who self-report or whose care partner or clinician reports cognitive, behavioral, or functional changes, the clinician should initiate a multitiered evaluation focused on the problem.
- **RECOMMENDATION 2:** The clinician should use patient-centered communication to develop a partnership with the patient or with the patient and a care partner to (1) establish shared goals for the evaluation process and (2) assess capacity (under-standing and appreciation) to engage in the goal-setting process for the evaluation.
- **RECOMMENDATION 3:** The evaluation process should use tiers of assessments and tests based on individual presentation, risk factors, and profile to establish a diagnostic formulation, including (1) the overall level of impairment, (2) the cognitive-behavioral syndrome, and (3) the likely cause(s) and contributing factors.
- **RECOMMENDATION 4:** During history taking for a patient being evaluated for cognitive or behavioral symptoms, the clinician should obtain reliable information involving an informant regarding changes in (1) cognition, (2) activities of daily living (ADL and instrumental ADL [IADL]), (3) mood and other neuropsychiatric symptoms, and (4) sensory and motor function. Use of structured instruments for assessing each of these domains is helpful.
- **RECOMMENDATION 5:** During history taking for a patient being evaluated for cognitive or behavioral symptoms, the clinician should obtain reliable information about individualized risk factors for cognitive decline.
- **RECOMMENDATION 6:** In a patient being evaluated for cognitive or behavioral symptoms, the primary clinician should perform an examination of cognition, mood, and behavior (mental status exam), and a dementia-focused neurologic examination, aiming to diagnose the cognitive-behavioral syndrome.
- **RECOMMENDATION 7:** In a patient being evaluated for cognitive or behavioral symptoms, clinicians should use validated tools to assess cognition.
- **RECOMMENDATION 8:** Laboratory tests in the evaluation of cognitive or behavioral symptoms should be multi-tiered and individualized to the patient's medical risks and profile. Clinicians should obtain routine Tier 1 laboratory studies in all patients.
- **RECOMMENDATION 9:** In a patient being evaluated for cognitive-behavioral syndrome, the clinician should obtain structural brain imaging to aid in establishing the cause(s). If magnetic resonance imaging (MRI) is not available or is contraindicated, computed tomography (CT) should be obtained.
- **RECOMMENDATION 13:** A specialist evaluating a patient with cognitive or behavioral symptoms should perform a comprehensive history and office-based examination of cognitive, neuropsychiatric, and neurologic functions, aiming to diagnose the cognitive-behavioral syndrome and its cause(s).

Provider action ■ Intermediate step ▾ Decision point ■ Consultation/referral ■ Tests

Recs 1-19

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Evaluation of Patient with Suspected Cognitive Impairment Dementia Subspecialist Setting

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• **RECOMMENDATION 10:** Throughout the evaluation process, the clinician should establish a dialogue with the patient and care partner about the understanding (knowledge of facts) and appreciation (recognition that facts apply to the person) of the presence and severity of the cognitive-behavioral syndrome. The patient and care partner's understanding and appreciation of the syndrome guide education, diagnostic disclosure, and methods for communicating and documenting diagnostic findings.

• **RECOMMENDATION 11:** In communicating diagnostic findings the clinician should honestly and compassionately inform both the patient and their care partner of the following information using a structured process: the name, characteristics, and severity of the cognitive-behavioral syndrome; the disease(s) likely causing the cognitive-behavioral syndrome; the stage of the disease; what can be reasonably expected in the future; treatment options and expectations; potential safety concerns; and medical, psychosocial and community resources for education, care planning and coordination, and support services.

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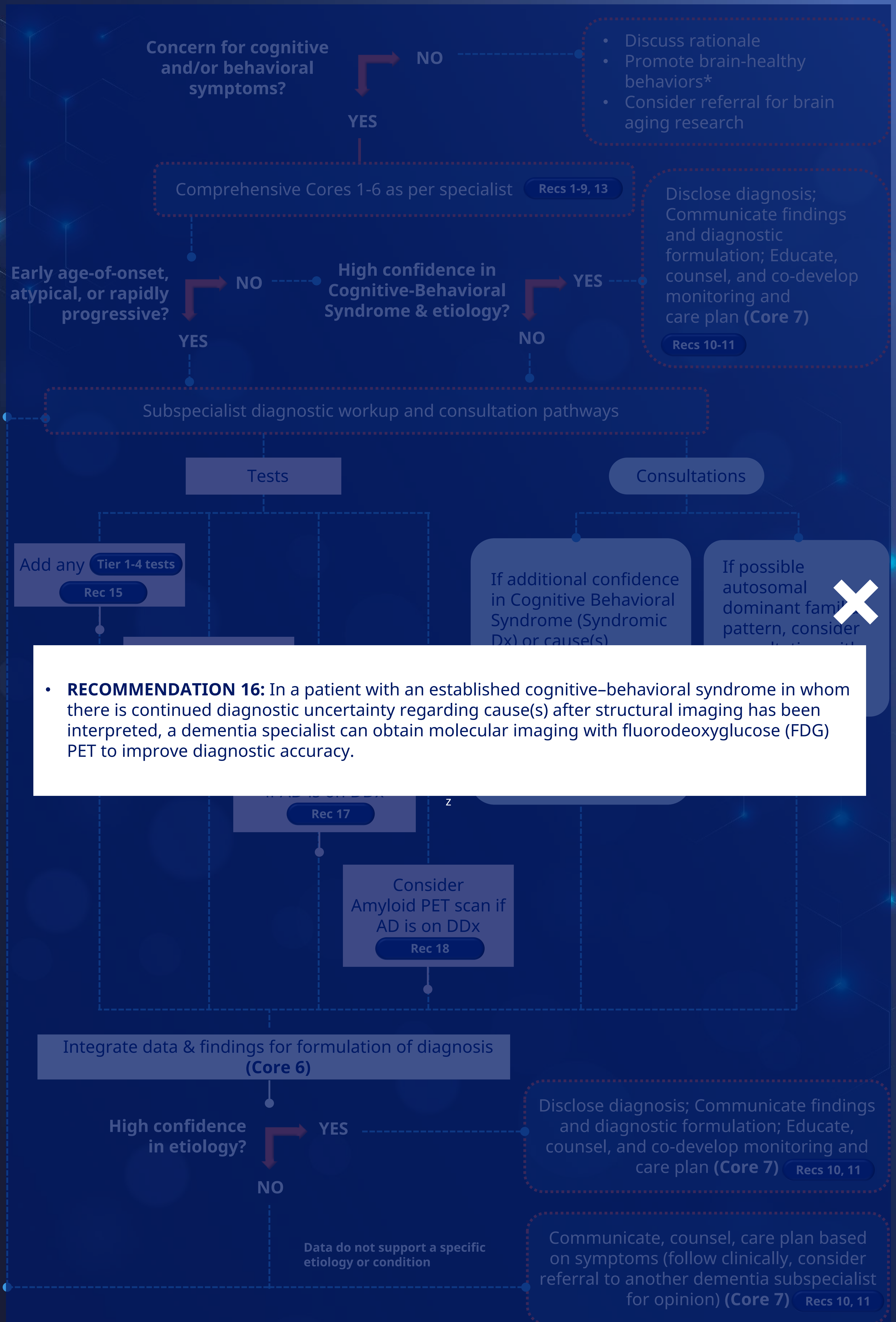
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Evaluation of Patient with Suspected Cognitive Impairment Dementia Subspecialist Setting

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• **RECOMMENDATION 16:** In a patient with an established cognitive-behavioral syndrome in whom there is continued diagnostic uncertainty regarding cause(s) after structural imaging has been interpreted, a dementia specialist can obtain molecular imaging with fluorodeoxyglucose (FDG) PET to improve diagnostic accuracy.

Provider action ■ Intermediate step ▾ Decision point ■ Consultation/referral ■ Tests

Recs 1-19

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Evaluation of Patient with Suspected Cognitive Impairment Dementia Subspecialist Setting

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• **RECOMMENDATION 17:** In a patient with an established cognitive-behavioral syndrome in whom there is continued diagnostic uncertainty regarding cause(s) after structural imaging with or without FDG PET, a dementia specialist can obtain CSF according to appropriate use criteria for analysis of amyloid beta (A β)42 and tau/phosphorylated tau (p-tau) profiles to evaluate for AD neuropathologic changes.

Provider action ■ Intermediate step ▾ Decision point ■ Consultation/referral ■ Tests

Recs 1-19

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Evaluation of Patient with Suspected Cognitive Impairment Dementia Subspecialist Setting

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• **RECOMMENDATION 18:** If diagnostic uncertainty still exists after obtaining structural imaging with or without FDG PET and/or CSF A β 42 and tau/p-tau, the dementia specialist can obtain an amyloid PET scan according to the appropriate use criteria to evaluate for cerebral amyloid pathology.

Provider action ■ Intermediate step ▾ Decision point ■ Consultation/referral ■ Tests

Recs 1-19

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Evaluation of Patient with Suspected Cognitive Impairment Dementia Subspecialist Setting

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• **RECOMMENDATION 19:** In a patient with an established cognitive-behavioral syndrome and a likely autosomal dominant family history, the dementia specialist should consider whether genetic testing is warranted. A genetic counselor should be involved throughout the process.

Provider action ■ Intermediate step ▾ Decision point ■ Consultation/referral ■ Tests

Recs 1-19

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DETeCD-ADRD Recommendations



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- **RECOMMENDATION 3:** The evaluation process should use tiers of assessments and tests based on individual presentation, risk factors, and profile to establish a diagnostic formulation, including (1) the overall level of impairment, (2) the cognitive-behavioral syndrome, and (3) the likely cause(s) and contributing factors.
- **RECOMMENDATION 4:** During history taking for a patient being evaluated for cognitive or behavioral symptoms, the clinician should obtain reliable information involving an informant regarding changes in (1) cognition, (2) activities of daily living (ADL and instrumental ADL [IADL]), (3) mood and other neuropsychiatric symptoms, and (4) sensory and motor function. Use of structured instruments for assessing each of these domains is helpful.
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- **RECOMMENDATION 11:** In communicating diagnostic findings the clinician should honestly and compassionately inform both the patient and their care partner of the following information using a structured process: the name, characteristics, and severity of the cognitive-behavioral syndrome; the disease(s) likely causing the cognitive-behavioral syndrome; the stage of the disease; what can be reasonably expected in the future; treatment options and expectations; potential safety concerns; and medical, psychosocial and community resources for education, care planning and coordination, and support services.
- **RECOMMENDATION 12:** A patient with atypical findings or in whom there is uncertainty about how to interpret the evaluation, or that is suspected of having an early-onset or rapidly progressive cognitive-behavioral condition, should be further evaluated expeditiously, usually including referral to a specialist.
- **RECOMMENDATION 13:** A specialist evaluating a patient with cognitive or behavioral symptoms should perform a comprehensive history and office-based examination of cognitive, neuropsychiatric, and neurologic functions, aiming to diagnose the cognitive-behavioral syndrome and its cause(s).
- **RECOMMENDATION 14:** Neuropsychological evaluation is recommended when office-based cognitive assessment is not sufficiently informative. Specific examples are when a patient or caregiver report concerning symptoms in daily life, but the patient performs within normal limits on a cognitive examination, or when the examination of cognitive-behavioral function is not normal but there is uncertainty about interpretation of results due to a complex clinical profile or confounding demographic characteristics. The neuropsychological evaluation, at a minimum, should include normed neuropsychological testing of the domains of learning and memory (in particular delayed free and cued recall/recognition); attention, executive function, visuospatial function, and language.
- **RECOMMENDATION 15:** When diagnostic uncertainty remains, the clinician can obtain additional (Tier 2-4) laboratory tests guided by the patient's individual medical, neuropsychiatric, and risk profile.
- **RECOMMENDATION 16:** In a patient with an established cognitive-behavioral syndrome in whom there is continued diagnostic uncertainty regarding cause(s) after structural imaging has been interpreted, a dementia specialist can obtain molecular imaging with fluorodeoxyglucose (FDG) PET to improve diagnostic accuracy.
- **RECOMMENDATION 17:** In a patient with an established cognitive-behavioral syndrome in whom there is continued diagnostic uncertainty regarding cause(s) after structural imaging with or without FDG PET, a dementia specialist can obtain CSF according to appropriate use criteria for analysis of amyloid beta (A β)₄₂ and tau/phosphorylated tau (p-tau) profiles to evaluate for AD neuropathologic changes.
- **RECOMMENDATION 18:** If diagnostic uncertainty still exists after obtaining structural imaging with or without FDG PET and/or CSF A β ₄₂ and tau/p-tau, the dementia specialist can obtain an amyloid PET scan according to the appropriate use criteria to evaluate for cerebral amyloid pathology.
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DETeCD-ADRD Recommendations



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- **RECOMMENDATION 18:** If diagnostic uncertainty still exists after obtaining structural imaging with or without FDG PET and/or CSF A β ₄₂ and tau/p-tau, the dementia specialist can obtain an amyloid PET scan according to the appropriate use criteria to evaluate for cerebral amyloid pathology.
- **RECOMMENDATION 19:** In a patient with an established cognitive-behavioral syndrome and a likely autosomal dominant family history, the dementia specialist should consider whether genetic testing is warranted. A genetic counselor should be involved throughout the process.



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Tier 1 Tests	Blood	"Cognitive lab panel" - TSH, vitamin B12, homocysteine, CBC with differential, complete metabolic panel (including calcium, magnesium, and liver function tests), ESR, CRP
	Imaging	Brain MRI without gadolinium—if unavailable or contraindicated then obtain non-contrast head CT
Tier 2 Tests	Blood	ANA, HgbA1c, lipid profile, folate, ammonia [^] , lead, Lyme antibody, RPR, HIV, SPEP, MMA, PT, PTT
	Imaging	Chest plain film/x-ray [^]
	Urine	Urinalysis [^] , urine cultured [^]
	Other	Sleep study: for obstructive sleep apnea or REM sleep disorder (LBD)
Tier 3 Tests	Blood	TPO, anti-thyroglobulin antibodies (TGA), FTA-ABS, ACE, ANCA, viral antibody studies (hepatitis B/C, EBV, CMV)
	Urine	UPEP, Bence-Jones proteins
	CSF	AD CSF biomarker panel ($A\beta_{42}$, tau, phospho-tau and ratios)*; consider obtaining cell count, glucose, total protein, and other CSF tests depending on the condition being considered. Lyme PCR; viral PCRs and cultures, VDRL, T.pallidum PCR
	Imaging	MR or CT angiogram of head and neck, carotid ultrasound, Brain MRI with gadolinium or head CT with contrast, Chest films <i>Brain FDG PET (or SPECT) scan**</i> , <i>Brain amyloid PET scan*</i>
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Tier 4 Tests	Blood	Paraneoplastic antibody panel, autoimmune antibody panel, anti-VGKC antibody, non-Lyme tick-borne disease panel (ehrlichiosis, babesiosis, anaplasmosis, rickettsiosis, Powassan), copper & ceruloplasmin, tumor markers, rheumatological studies
	Urine	24-hour urine collection for heavy metals, porphyria, and/or copper
	CSF	Protein 14-3-3, NSE, T. whipplei PCR, paraneoplastic antibody panel, autoimmune antibody panel, anti-VGKC antibody, cytology, flow cytometry, other stains and cultures for infectious agents (bacterial, fungal, AFB)
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Clinically emerging tests[#]	Blood	$A\beta$, hyperphosphorylated tau, NfL, GFAP, etc.
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