

Disclaimer: This algorithm has been developed for UT MD Anderson using a multidisciplinary approach considering circumstances particular to UT MD Anderson's specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care. This algorithm should not be used to treat pregnant women.

PRESENTATION

INITIAL EVALUATION

ASSESSMENT AND RISK CATEGORIZATION

Patients who are being evaluated for, currently receiving, or have completed head & neck radiation therapy (H&N RT)

- Review patient's medical history, including cardiovascular risk factors and history of atherosclerotic cardiovascular disease (ASCVD)
- Review available prior imaging¹ for evidence of carotid atherosclerosis or stenosis
- Obtain a baseline carotid duplex ultrasound (CDUS)² if:
 - A prior CDUS has not been performed within the previous year **or**
 - Prior results are unavailable or inaccessible

- Determine the patient's RICS risk category based on the criteria below: Patients are considered **ELEVATED RISK** if **ANY** of the following criteria are **present**, and **LOW RISK** if **ALL** criteria are **absent**:
- Clinical (symptomatic) ASCVD, including:
 - Coronary artery disease with documented myocardial infarction or ischemia (stable or unstable angina, abnormal cardiac stress test)
 - Cerebrovascular disease (prior ischemic stroke or transient ischemic attack)
 - Symptomatic peripheral artery disease
 - Prior revascularization procedures (percutaneous coronary intervention, coronary artery bypass grafting, carotid endarterectomy, carotid artery stenting, or peripheral arterial revascularization)
 - Evidence of subclinical atherosclerosis (carotid or coronary artery plaque on prior imaging¹)
 - Age ≥ 50 years
 - Presence of **at least one** major cardiovascular risk factor (smoking, hypertension, dyslipidemia, obesity, diabetes mellitus)
 - Carotid radiation exposure ≥ 40 Gy-equivalent EQD2³

See [Page 2](#) for management based on risk category and baseline CDUS findings

EQD2 = Equivalent dose in 2 Gy fractions
CTA = Computed tomography angiography
MRA = Magnetic resonance angiography

¹ Imaging may include, but is not limited to oncologic imaging (CT, PET/CT, MRI) and vascular imaging (CDUS, CTA, MRA)

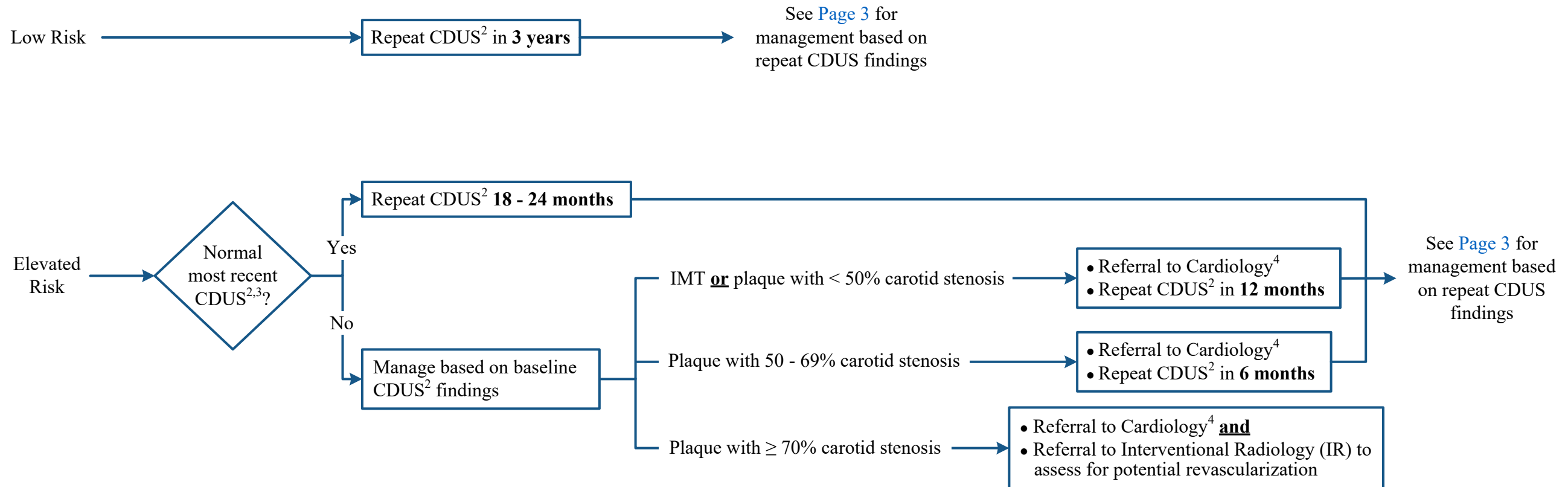
² If CDUS is technically limited or nondiagnostic, obtain CTA of the head and neck for further evaluation

³ Vascular injury may occur at lower doses and clinical judgement should be applied

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RISK CATEGORY

REFERRALS AND REPEAT CDUS INTERVAL¹



IMT = intima-media thickness

¹ Patients developing new neurologic symptoms should undergo urgent evaluation regardless of scheduled surveillance interval

² If CDUS is technically limited or nondiagnostic, obtain CTA of the head and neck for further evaluation

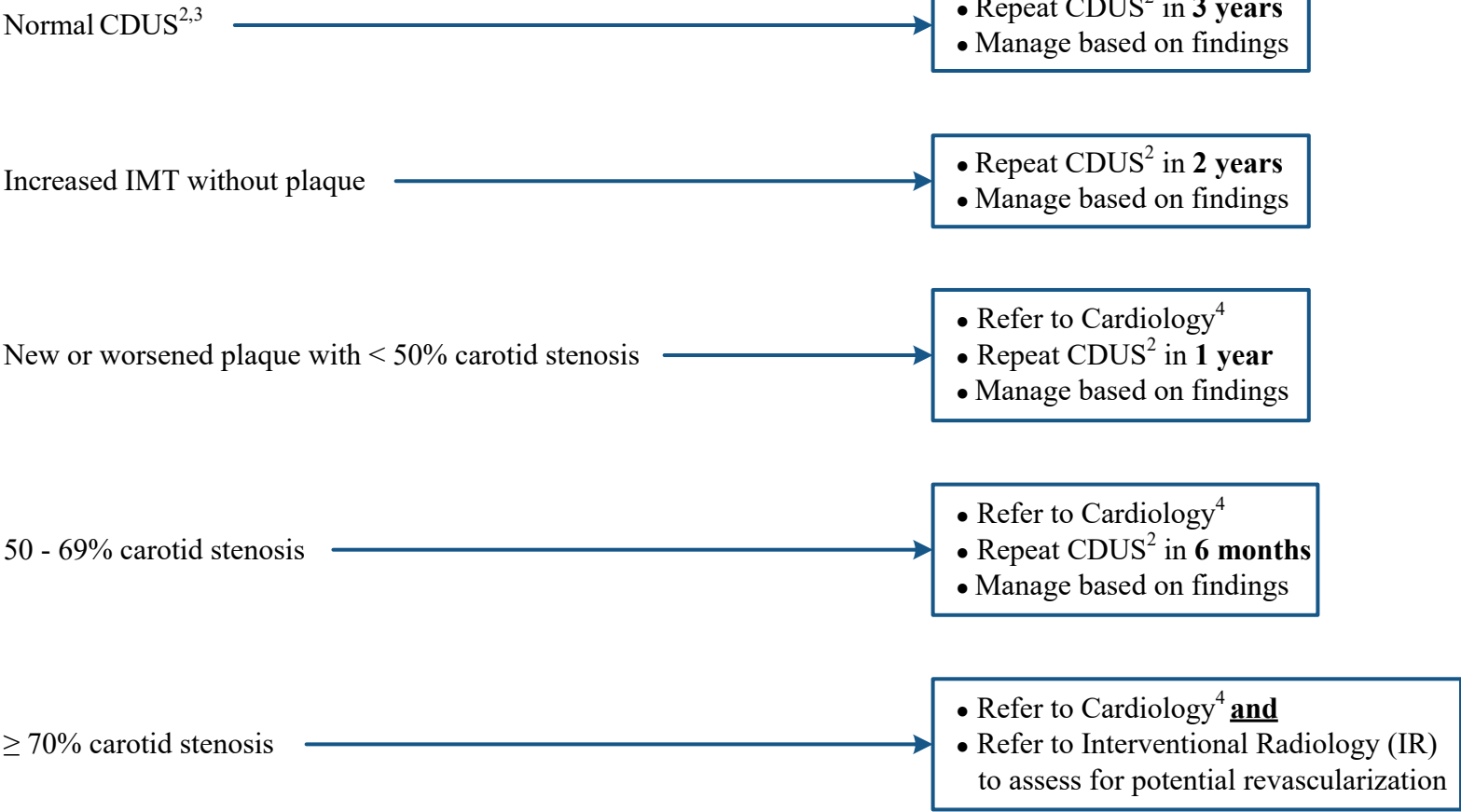
³ Normal CDUS is defined by the absence of increased IMT and carotid plaque

⁴ Referral to Cardiology, if not already following, for optimization of cardiovascular risk factor management and preventive medical therapy, as clinically indicated

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REPEAT CDUS FINDINGS

FUTURE CDUS SURVEILLANCE INTERVAL¹, REFERRALS, AND MANAGEMENT



¹ Patients developing new neurologic symptoms should undergo urgent evaluation regardless of scheduled surveillance interval
² If CDUS is technically limited or nondiagnostic, obtain CTA of the head and neck for further evaluation
³ Normal CDUS is defined by the absence of increased IMT and carotid plaque
⁴ Referral to Cardiology, if not already following, for optimization of cardiovascular risk factor management and preventive medical therapy, as clinically indicated

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DEVELOPMENT CREDITS

This practice consensus statement is based on majority opinion of the Radiation-Induced Carotid Stenosis (RICS) Screening After Radiation Therapy for Head & Neck Cancer experts at The University of Texas MD Anderson Cancer Center for the patient population. These experts included:

Core Development Team Leads

Efstratios Koutroumpakis, MD (Cardiology)

Workgroup Members

Neal S. Akhave, MD (Thoracic Head & Neck Medical Oncology)

Stephen Chen, MD (Interventional Radiology)

Karen Choi, MD (Head and Neck Surgery)

Olga N. Fleckenstein, BS[♦]

Clifton David Fuller, MD, PhD (Radiation Oncology)

Sherry Garcia, MS, PA-C (Radiation Oncology)

Stephen Lai, MD, PhD (Head and Neck Surgery)

Brittnee Macintyre, MSN, APRN, FNP-C[♦]

Amy Moreno, MD (Radiation Oncology)

Elie N. Mouhayar, MD (Cardiology)

Justine Robinson, MPAS (Head & Neck Surgery)

Chenyang Wang, MD, PhD (CNS Radiation Oncology)

Mary Lou Warren, DNP, APRN, CNS-CC[♦]

[♦]Clinical Effectiveness Development Team