

COLOR DOPPLER | SCORING RUBRIC

Instructor reference | Matching the 0-5 Color Doppler Student Critique worksheets

HOW TO USE

Rate observable image quality for the specified vessel and clinical task. Do not infer a specific setting or cause from image appearance alone.

GLOBAL SCALE

0 Unacceptable 1 Poor 2 Below expectations 3 Adequate 4 Good 5 Excellent

A. CLINICAL CONTENT & COLOR REGION OF INTEREST (ROI)

- 0** Target vessel / relevant anatomy absent; color assessment impossible.
- 1** Vessel poorly shown; color ROI critically misplaced or inadequate.
- 2** Incomplete vessel anatomy or substantial ROI framing limitations.
- 3** Appropriate vessel visible; ROI permits basic flow assessment.
- 4** Well-displayed anatomy and efficiently positioned color ROI.
- 5** Anatomy, plane, vessel segment, and color ROI optimally demonstrated.

B. COLOR FLOW SENSITIVITY & FILLING

- 0** Clinically relevant flow cannot be evaluated.
- 1** Severe failure to depict expected flow; extensive unexplained dropout.
- 2** Inconsistent filling or substantial loss of clinically relevant flow.
- 3** Usable flow display with some gaps or sensitivity limitations.
- 4** Good filling and sensitivity for the expected flow conditions.
- 5** Excellent depiction of relevant flow without unnecessary overfilling.

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Criterion-specific anchors | 0 = unacceptable; 5 = excellent

C. COLOR SPATIAL DEFINITION

- 0** Color location cannot be related reliably to vessel anatomy.
- 1** Severe color bleed or imprecise localization obscures boundaries.
- 2** Noticeable blooming, color spill, or fragmented boundary definition.
- 3** Vessel margins generally recognizable with some color imprecision.
- 4** Well-defined color pattern largely confined to expected flow region.
- 5** Color distribution sharply localized, with minimal extraneous display.

D. VELOCITY SCALE / ALIASING

- 0** Scale or color display prevents meaningful flow interpretation.
- 1** Major scale mismatch; clinically important flow depiction misleading.
- 2** Clearly suboptimal scale or poorly interpreted aliasing.
- 3** Scale permits assessment; some avoidable aliasing or sensitivity loss.
- 4** Scale/baseline well chosen; aliasing recognized in clinical context.
- 5** Scale appropriately balances sensitivity, aliasing, and clinical task.

E. DOPPLER CONTROL OPTIMIZATION

- 0** Observable display settings preclude meaningful interpretation.
- 1** Severe apparent optimization problems compromise color data.
- 2** Multiple significant, observable opportunities for improvement.
- 3** Generally usable settings, with identifiable refinements possible.
- 4** Gain, wall filter, ROI, steering and other controls well balanced.
- 5** Excellent task-specific optimization with tradeoffs appropriately managed.

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Remaining descriptors and three-image instructor score record

F. NOISE, ARTIFACTS & DIAGNOSTIC IMPACT

- 0** Artifacts/noise prevent reliable interpretation of displayed flow.
- 1** Severe flash, clutter, blooming, or dropout dominates the image.
- 2** Substantial artifact decreases confidence or masks relevant flow.
- 3** Artifacts present but basic flow assessment remains possible.
- 4** Minor artifacts have little impact on clinical interpretation.
- 5** Artifact limited or appropriately recognized as a meaningful finding.

G. TEMPORAL PERFORMANCE (CINE / LIVE ONLY)

- 0** Flow changes cannot be assessed over time.
- 1** Flow updates severely lag or obscure clinically important changes.
- 2** Poor responsiveness; significant temporal smearing or persistence.
- 3** Flow changes interpretable with modest temporal limitations.
- 4** Flow updates are responsive and consistently depict relevant changes.
- 5** Rapid flow changes faithfully depicted without distracting lag/smear.

COLOR DOPPLER | INSTRUCTOR SUMMARY

Three-image score record | Corresponds to Images 1, 2 and 3

Instructor

Course / date

Student

Assign 0-5 per domain; leave G blank for still images. Scores are educational indicators.

DOMAIN	IMAGE 1	IMAGE 2	IMAGE 3
A. Clinical content & color ROI			
B. Color flow sensitivity & filling			
C. Color spatial definition			
D. Velocity scale / aliasing			
E. Doppler control optimization			
F. Noise, artifacts & diagnostic impact			
G. Temporal performance (cine/live)			
FINAL SCORE (still: /30 cine/live: /35)			

INSTRUCTOR COMMENTS / PRIORITY CORRECTION