

# Bouthillier classification

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It is used clinically by neurosurgeons, neuroradiologists and neurologists and relies on the angiographic appearance of the vessel and histological comparison rather than on the embryonic development.

The Bouthillier classification includes the entire [internal carotid artery](#) (ICA), uses a numerical scale in the direction of [blood flow](#), and describes the segments of the ICA according to a detailed understanding of the [anatomy](#) surrounding the ICA and the [compartments](#) through which it travels. Twenty cadaveric specimens with intravascular injection of silicone rubber were used for microscopic dissection and 20 dry skulls were inspected. Histological sections in critical areas were examined. The authors' classification has the following seven segments: C1, cervical; C2, petrous; C3, lacerum; C4 cavernous; C5, clinoid; C6, ophthalmic; and C7, communicating. This classification is practical, accounts for new anatomic information and clinical interests, and clarifies all segments of the ICA

They divided the petrous portion describing the lacerum segment (exposed in transfacial procedures and exploration of Meckel's cave) and added the clinoid segment between the proximal and distal dural rings, of interest in cavernous sinus surgery <sup>1)</sup>.

see [Internal carotid artery C1 segment](#).

see [Internal carotid artery C2 segment](#).

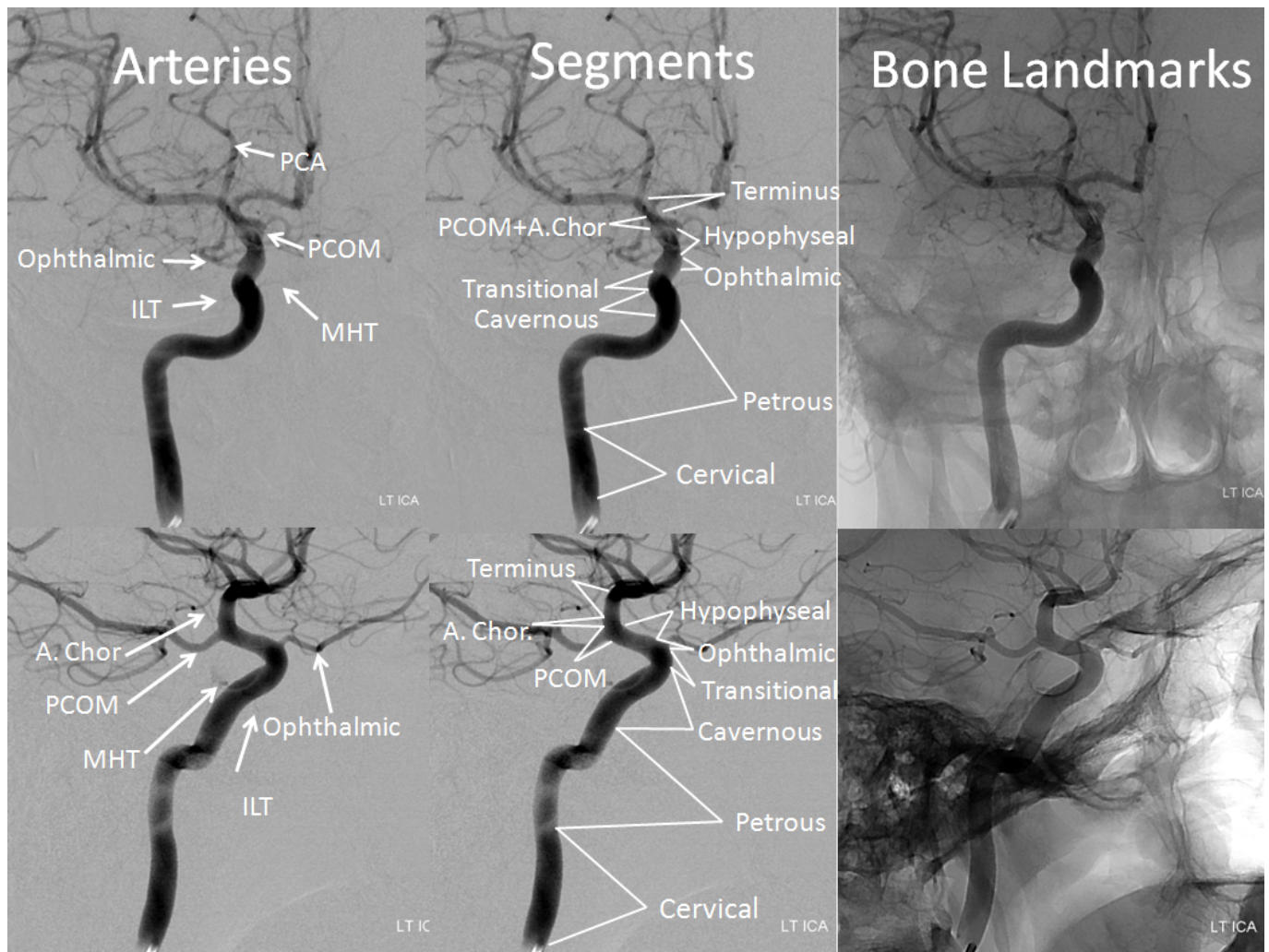
see [Internal carotid artery C3 segment](#).

see [Internal carotid artery C4 segment](#).

see [Internal carotid artery C5 segment](#).

see [Internal carotid artery C6 segment](#).

see [Internal carotid artery C7 segment](#).



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<http://neuroangio.org/anatomy-and-variants/internal-carotid-artery-and-its-aneurysms/>

1)

Bouthillier A, van Loveren HR, Keller JT. Segments of the internal carotid artery: a new classification. *Neurosurgery*. 1996 Mar;38(3):425-32; discussion 432-3. PubMed PMID: 8837792.

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Last update: **2025/05/13 02:23**

