

Anatomy notes for Mouse Atlas model EMA10

ANNOTATIONS ON ARBITRARY BOUNDARIES OF TISSUES:

GENERAL REMARKS:

The delineation of tissue boundaries is based on cell shape and configuration as seen in the original sections under a microscope. Where it was not possible to base boundaries on these grounds, we tried to look in other planes in the digital model. In a few cases, this led to an unambiguous boundary e.g. for the somites. However, in the majority of the cases in which boundaries could not be discerned in the original sections, decisions had to be based on other criteria than cell shape and configuration; we call these 'arbitrary' boundaries. Arbitrary boundaries are generally based on 3-dimensional shape, for example, division between the branchial arch and the rest of the embryo.

In this document we list the tissues with arbitrary boundaries and the grounds for each decision. The tissues are listed alphabetically in bold under the main components in the [anatomy database](#). Tissues adjacent to the arbitrary boundary are displayed in italics if they are part of a different component in the anatomy database. Boundaries which, though based on cell shape and configuration, were doubtful are also listed.

EMA10, THEILER STAGE 10: Domain annotation table

embryo	primitive streak	If no different organisation of cells between epiblast and embryonic mesoderm can be distinguished, the area was defined as primitive streak.
	endoderm	Boundary between embryonic endoderm and extraembryonic (visceral) endoderm based on extent of epiblast .
	mesoderm	Boundary between embryonic mesoderm and extraembryonic (visceral yolk sac) mesoderm based on extent of epiblast .
	cavities and linings	Boundary between embryonic and extraembryonic component of proamniotic cavity based on extent of epiblast
extraembryonic component	amniotic fold	Boundary between ectodermal component of amniotic fold and epiblast/extraembryonic ectoderm based on 3D shape.
	ectoderm	Boundary of epiblastic and extraembryonic component of ectodermal component of amniotic fold based on cell shape.
	endoderm	Boundary between extraembryonic ectoderm and polar trophoctoderm determined by proximal boundary of visceral endoderm .
	polar trophoctoderm	Proximal boundary of visceral endoderm based on start of ectoplacental cone .
		The ectoplacental cone may contain parietal endoderm cells