

Andrea Poretti

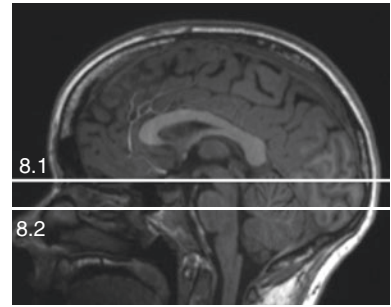
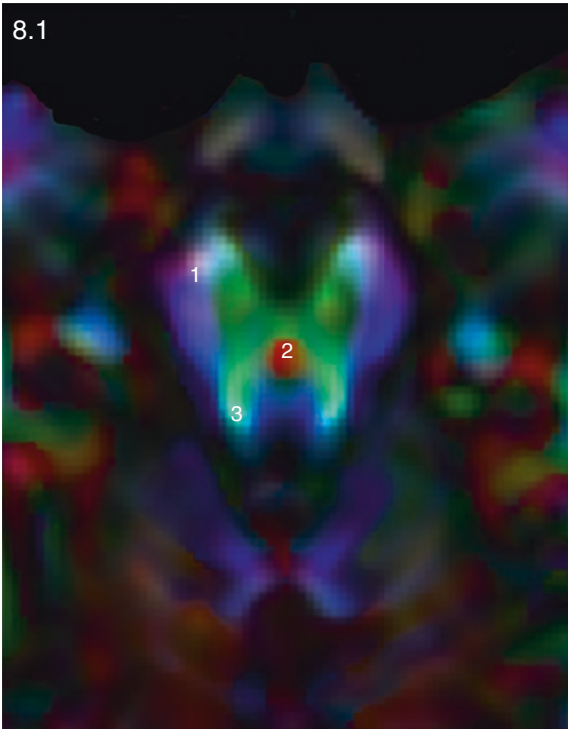
Details of the diffusion tensor imaging (DTI) technique and acquisition details were described in detail in Chap. 2. For this chapter, selected images were chosen for labeling that best represented the local anatomy in a given region. Note that we chose to reconstruct images in the planes most commonly viewed by radiologists; as such, our labels are more relevant to routine clinical

MRI than the labels presented in traditional histological atlases [1–5].

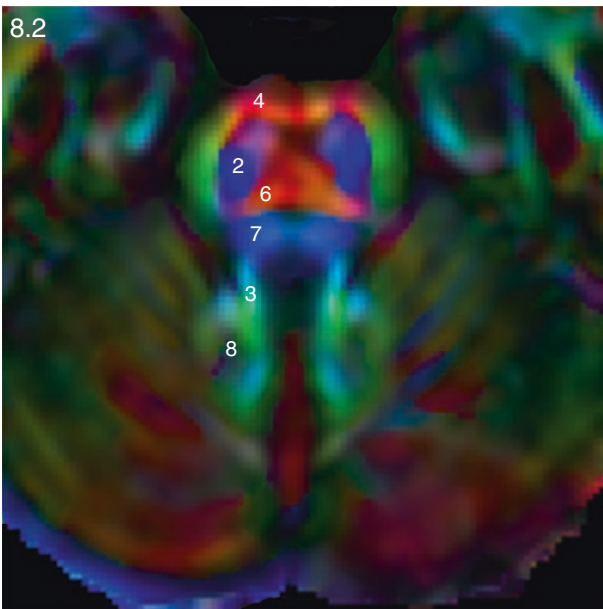
Each page contains the labeled images on the left-hand side. A small image on the top right of the page documents the locations of the slices, and a key in the lower right-hand side of the page lists the individual structures.

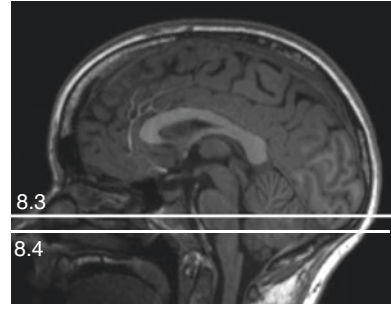
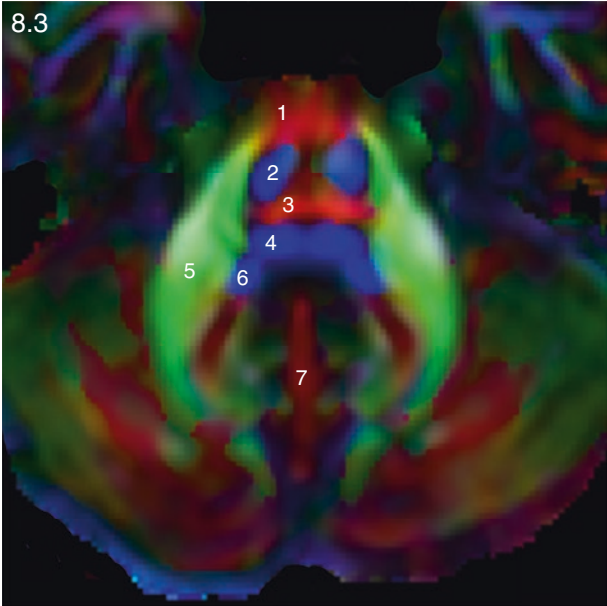
Andrea Poretti was deceased at the time of publication.

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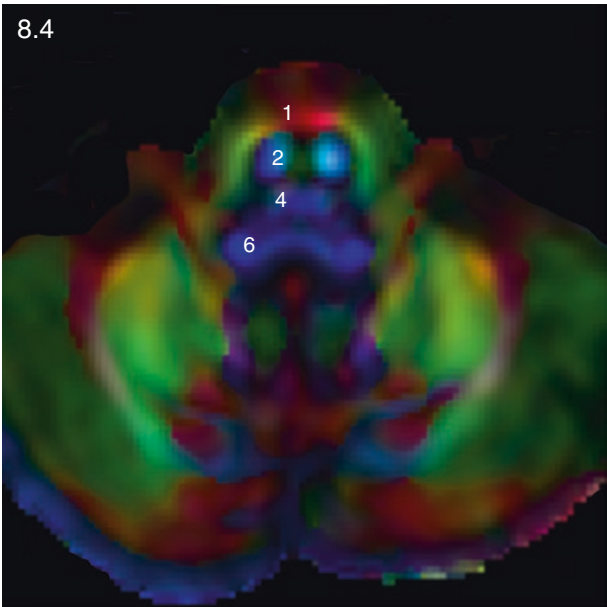


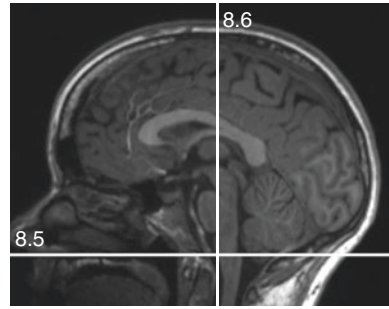
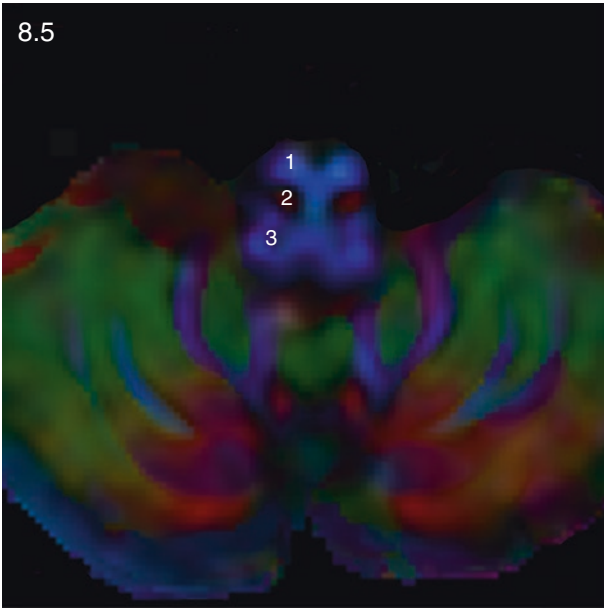
1	Cerebral peduncles
2	Decussation of superior cerebellar peduncles
3	Superior cerebellar peduncles
4	Anterior transverse pontine fibers
5	Corticospinal tracts
6	Posterior transverse pontine fibers
7	Medial lemniscus
8	Dentate nuclei



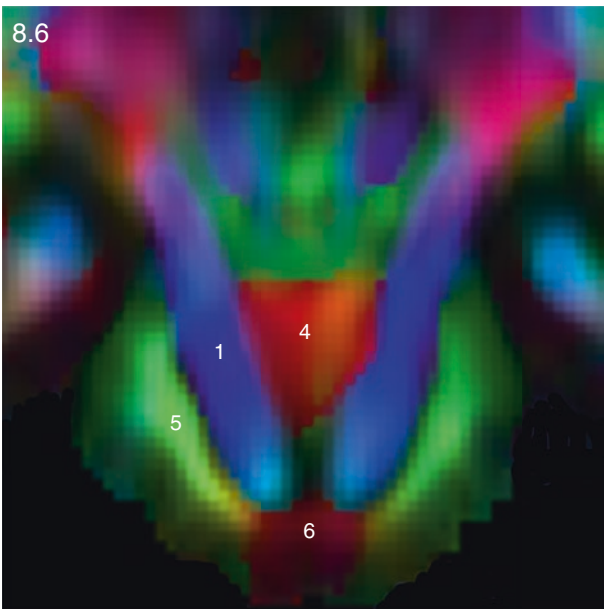


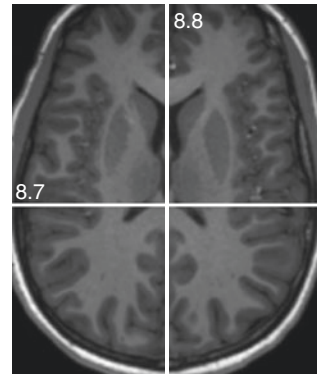
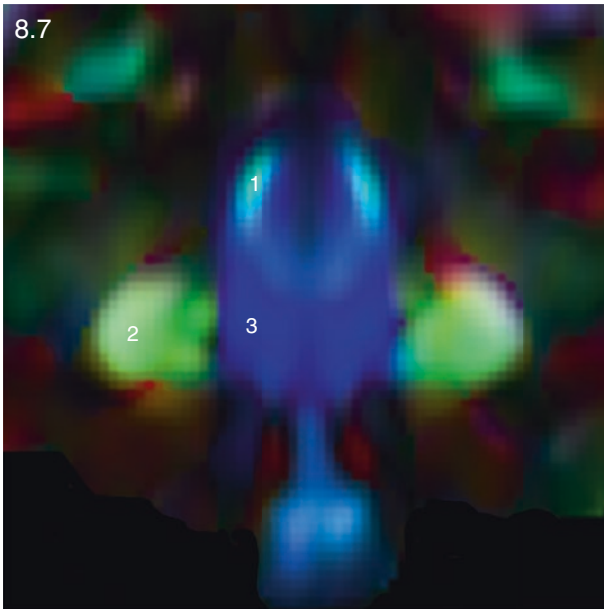
1	Anterior transverse pontine fibers
2	Corticospinal tracts
3	Posterior transverse pontine fibers
4	Medial lemniscus
5	Middle cerebellar peduncles
6	Inferior cerebellar peduncles
7	Cerebellar vermis



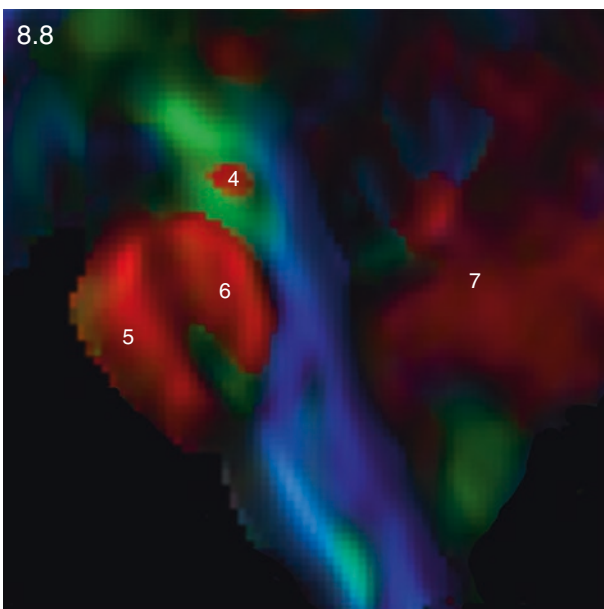


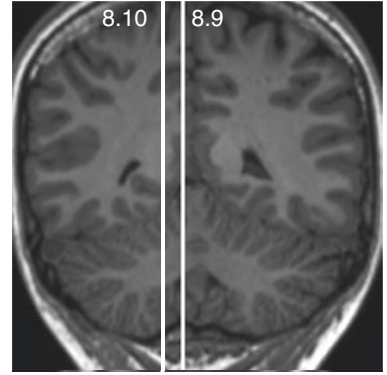
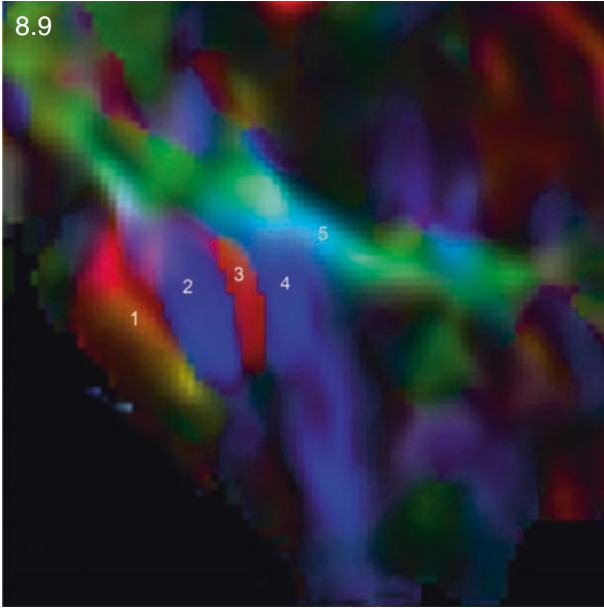
1	Corticospinal tracts
2	Inferior olivary nuclei
3	Inferior cerebellar peduncles
4	Posterior transverse pontine fibers
5	Middle cerebellar peduncles
6	Anterior transverse pontine fibers



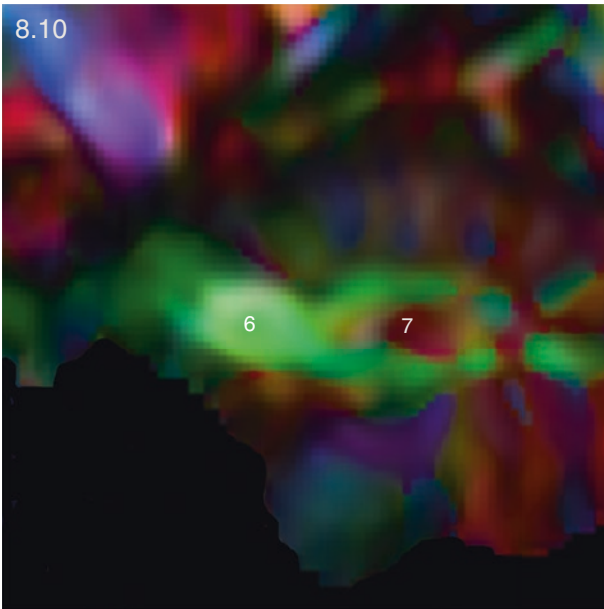


1	Superior cerebellar peduncles
2	Middle cerebellar peduncles
3	Medial lemniscus
4	Decussation of cerebellar peduncles
5	Anterior transverse pontine fibers
6	Posterior transverse pontine fibers
7	Cerebellar vermis





1	Anterior transverse pontine fibers
2	Corticospinal tracts
3	Posterior transverse pontine fibers
4	Medial lemniscus
5	Superior cerebellar peduncles
6	Middle cerebellar peduncles
7	Dentate nucleus



References

1. Habas C, Cabanis EA (2007) Anatomical parcellation of the brainstem and cerebellar white matter: a preliminary probabilistic tractography study at 3 T. *Neuroradiology* 49(10):849–863
2. Salamon N, Sicotte N, Alger J, Shattuck D, Perlman S, Sinha U, Schultze-Haak H, Salamon G (2005) Analysis of the brain-stem white-matter tracts with diffusion tensor imaging. *Neuroradiology* 47(12):895–902
3. Nagae-Poetscher LM, Jiang H, Wakana S, Golay X, van Zijl PC, Mori S (2004) High-resolution diffusion tensor imaging of the brain stem at 3 T. *AJNR Am J Neuroradiol* 25(8):1325–1330
4. Salamon N, Sicotte N, Drain A, Frew A, Alger JR, Jen J, Perlman S, Salamon G (2007) White matter fiber tractography and color mapping of the normal human cerebellum with diffusion tensor imaging. *J Neuroradiol* 34(2):115–128
5. Aggarwal M, Zhang J, Pletnikova O, Crain B, Troncoso J, Mori S (2013) Feasibility of creating a high-resolution 3D diffusion tensor imaging based atlas of the human brainstem: a case study at 11.7 T. *Neuroimage* 74:117–127