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## The many aspects of desmoids tumors on MR imaging

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**Objectives:** To illustrate the MRI appearance in different types of desmoid tumors, describing imaging characteristics that can contribute to specific diagnosis.

**Materials and Methods:** The MR imaging studies of six patients, 14-77 yr-old with a final diagnosis of desmoid tumor were retrospectively reviewed. The diagnosis of desmoid tumor was suggested preoperatively and verified on surgery and histopathology in all cases. All MR imaging studies were performed in a 3-yr period in the MR imaging Unit of our hospital, on a 1.5 magnet, using T1 with and without fat suppression before and after iv administration of gadolinium, and T2 with and without fat suppression, weighted images.

**Results:** The tumor located within the anterior abdominal wall muscles in three patients, in right psoas muscle in one patient and in the posterolateral compartment of the knee in one patient. On T1-weighted images, the tumor appeared isointense to hypointense to muscle, whereas T2 sequences revealed variable signal intensity, predominantly increased, homogeneous or inhomogeneous, containing low-intensity areas, corresponding to dense fibrous tissue. Notable gradual enhancement, accentuated in the fibrous parts, was present. In one patient the lesion was markedly and homogeneously hypointense.

Indiscrete lesion margins and adjacent tissue infiltration was seen in three patients implied local invasion. The tumor was well defined in the remaining three patients. Recurrence was denoted in two out of four follow-up studies.

**Conclusion:** MR imaging is the key imaging technique for initial preoperative diagnosis of desmoids tumors. Characteristic location, T2 hypointensity and intense and delayed contrast enhancement may lead to specific diagnosis.