Most textbooks related to imaging are organized into chapters based on the disease or the conditions that are described. This traditional way of organizing an imaging book, namely, from the disease to the images, provides a firm structure and allows the author or editor to present all the imaging characteristics of a specific disease condition with its typical, atypical, and specific features in one place. This book is no different and is also organized in this traditional way.

For the clinician using the book as an aid to solve a clinical case, this traditional approach is not practical. To match the imaging characteristics of your specific clinical case you essentially have to go through the entire book to find all the images that match the imaging features of your specific patient. To overcome this problem of a disease-oriented imaging book, we developed this chapter: here we turned the organization around, proceeding from the images to the disease/diagnosis. In this chapter we have prepared the material based on the imaging characteristics and grouped all conditions with similar imaging features together in seven tables. We used DW imaging, ADC, and T2 characteristics to create seven tables with conditions that appeared similar on MR imaging.

The clinician can go directly to this chapter, determine if the lesion in question has a high, intermediate, or low DW imaging signal intensity and then determine the same with regard to the ADC and T2 characteristics. He or she can then go to the table in Chapter 16 that lists conditions with these imaging features. Each table is essentially a list of differential diagnoses for conditions with similar imaging characteristics. When combined with the knowledge of patient symptomatology and demographic criteria, the radiologist will be able to narrow the differential diagnosis to a few conditions.

These tables take into account that the same condition may have variable imaging characteristics; for this reason, several conditions are listed in more than one table. Moreover, within the tables there are variations as to the degree of a specific imaging feature, which allows the clinician to match his/her clinical case to the best table and condition. Chapter 16 makes direct reference to other chapters of the book, where a full description is then provided.
Table 16.1
Differential diagnoses for lesions with a high diffusion signal associated with low ADC and isointense T2 signal

<table>
<thead>
<tr>
<th>Diagnoses</th>
<th>Reference images</th>
</tr>
</thead>
<tbody>
<tr>
<td>DWI high</td>
<td>ADC low</td>
</tr>
</tbody>
</table>

**Infarction/hypoxia/trauma**

- **Nonaccidental head injury**
  - Fig. 14.12 d
  - Fig. 14.12 e
  - Fig. 14.12 b

- **Hyperacute infarction**
  - Fig. 5.1 b
  - Fig. 5.1 c
  - Fig. 5.1 a

- **Hypoxic ischemic encephalopathy**
  - Fig. 14.9 c
  - Fig. 14.9 d
  - Fig. 14.9 a

**Toxic/metabolic**

- **Methotrexate leukoencephalopathy**
  - Fig. 10.2 b
  - Fig. 10.2 c
  - Fig. 10.2 a