Tagging along with DICOM format

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(ISMRM Honolulu Meeting - Image Analysis Course, Tuesday, 21 April)

This lecture covers the following topics:

- What is DICOM? Where can I find more information?
- Converting from DICOM images to other medical imaging formats (e.g., NIFTI)
- A brief introduction to DICOM *Information Object Definitions* (IOD), *Modules*, and *Attributes*. The "MR Image IOD" will be examined as a specific example.
- Structure of the DICOM File Format:
    - File Meta Information
    - Data Set
- A closer look at DICOM *Attribute*s:
    - Attribute name
    - Tag (Group # + Element #)
    - Value
    - Value Representation
    - Value Multiplicity
    - Transfer Syntax
- Some *Attributes* relating to image geometry:
    - Pixel Spacing
    - Image Orientation (Patient)
    - Image Position (Patient)
    - Slice Thickness
    - Slice Location
    - Spacing Between Slices
    - Frame of Reference UID
    - Instance number (slice number)
    - Pixel representation
    - Rescale intercept
    - Rescale slope
    - Image time (for dynamic datasets)
- Assembling 3D and 4D image arrays
- Using DICOM geometrical attributes to register between MR images