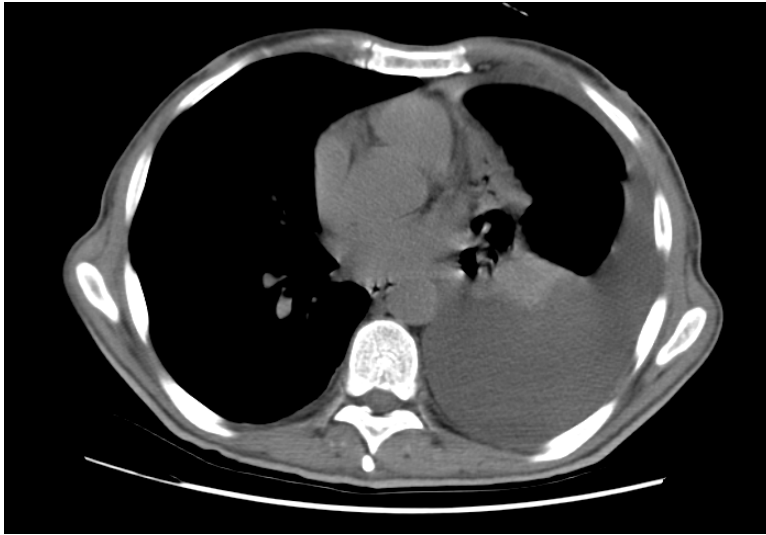


High dynamic range images

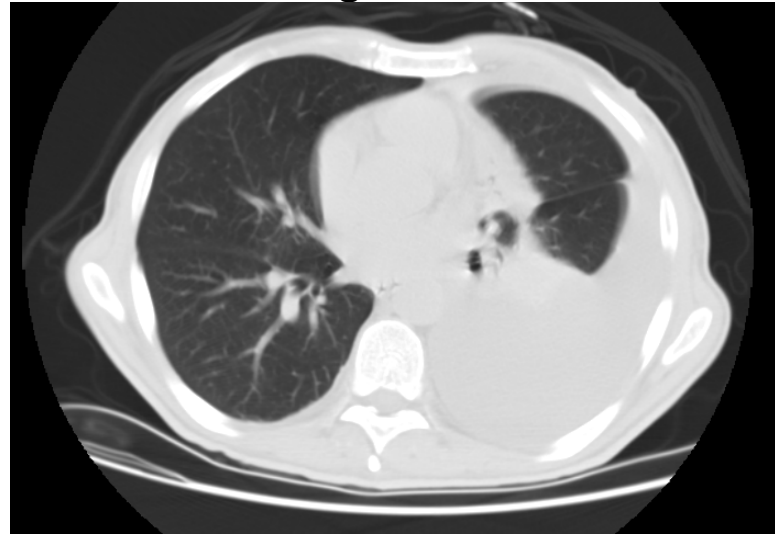
F. Edward Boas

2007-02-27

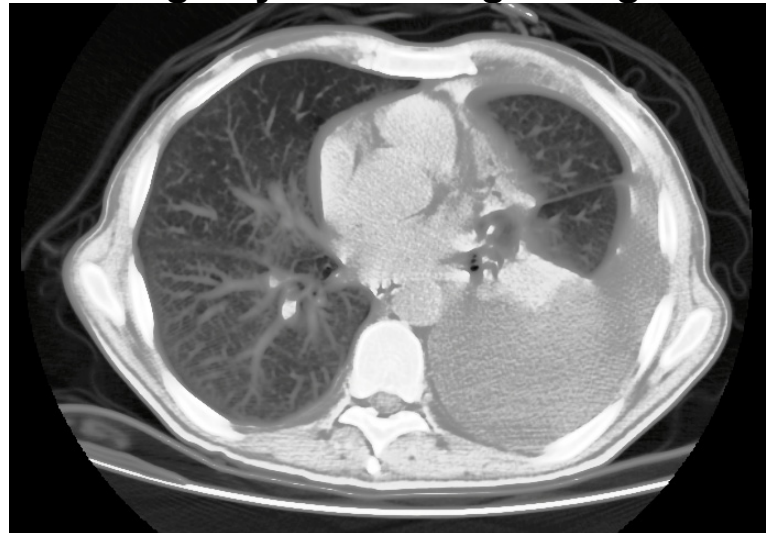
Abdominal window



Lung window

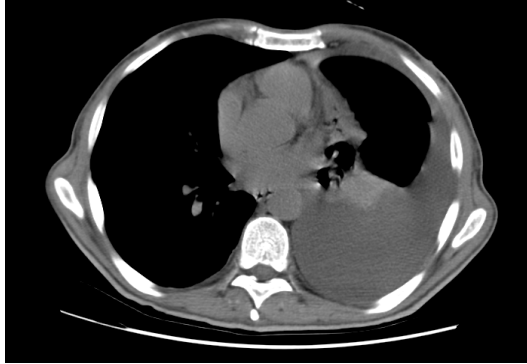


High dynamic range image

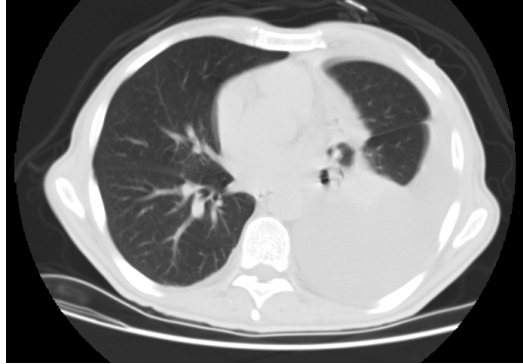


High dynamic range images

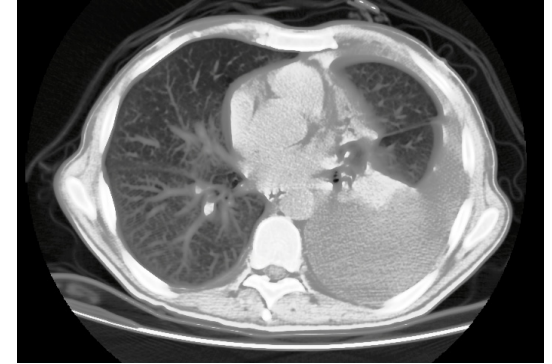
Abdominal window



Lung window



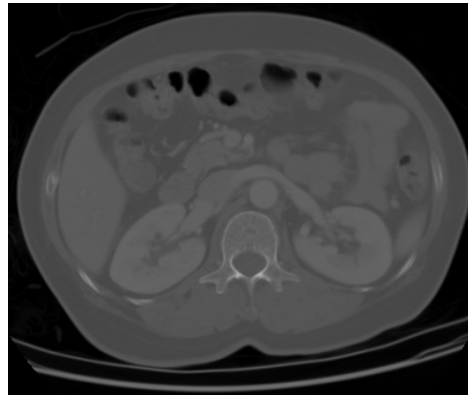
High dynamic range image



Abdominal window



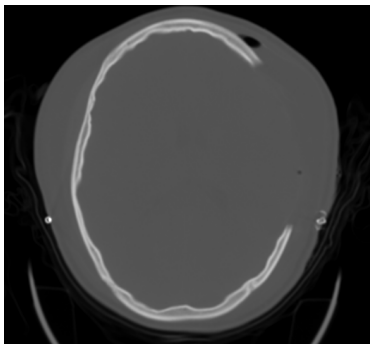
Bone window



High dynamic range image



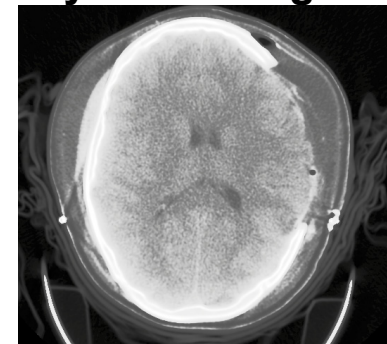
Bone window



Brain window

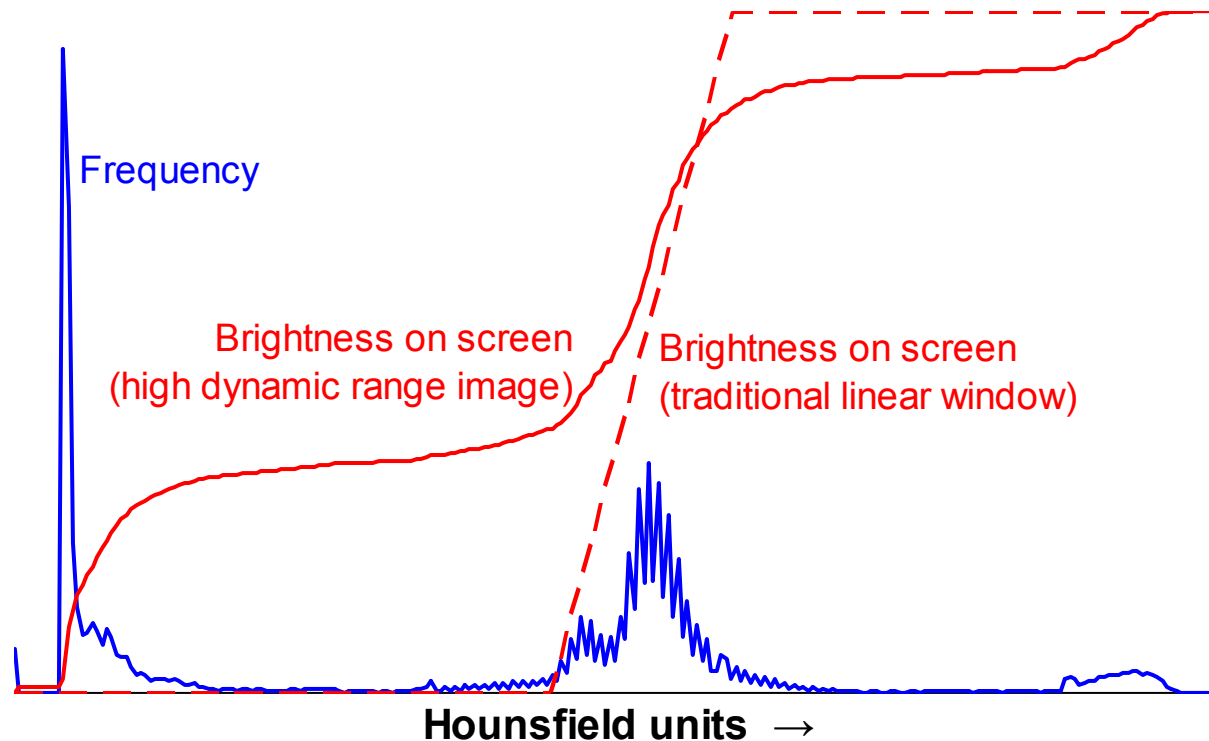


High dynamic range image



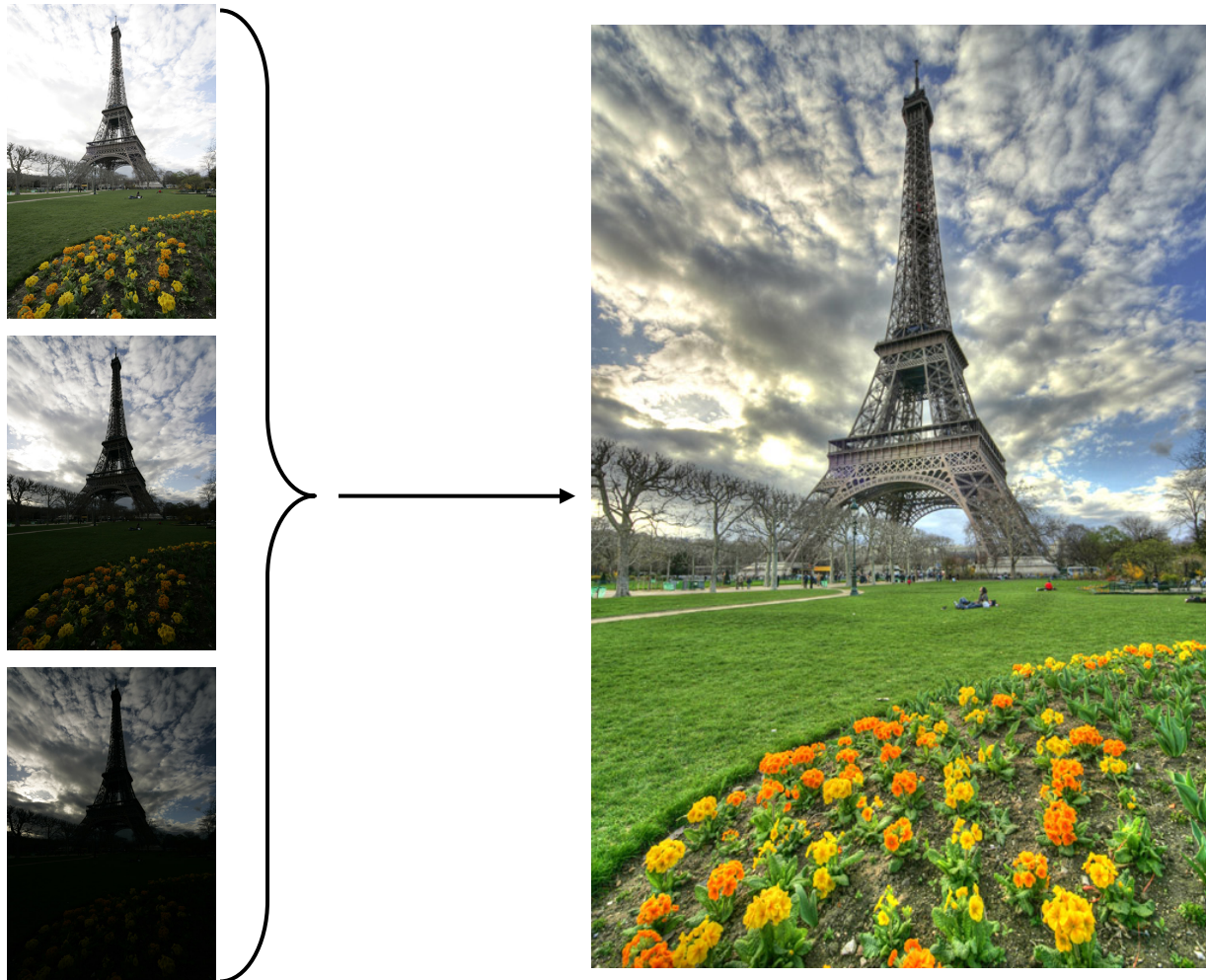
High dynamic range images

Modern computer monitors can only display 256 levels of gray, but CT scans have a much larger dynamic range. Thus, linear windows (---) have been used to display a portion of the dynamic range on a computer monitor. However, by using a non-linear mapping (—) that devotes more contrast to the Hounsfield units that occur frequently in the image (—), the full dynamic range can be displayed in a single image.



High dynamic range images in photography

The same strategy has been used in photography. The traditional photos are shown on the left, and the high dynamic range image on the right.



Images from <http://www.hdrsoft.com>