



Current practices of MSCT: A descriptive analysis

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1. Learning objectives

To provide insight into current practices of clinical applications of Multi-slice Computed Tomography (MSCT) using the new generation of CT systems able to acquire simultaneously at least 16 sections, and to identify specific applications that justify the radiation exposure.

2. Background

Rapid technical developments in CT have had a substantial impact on the applications of this technology. Since CT is already associated with a relatively high (collective) patient dose, a review of current practices was performed.

3. Imaging findings OR Procedure details

Administrative patient data on diagnostic applications corresponding to one contiguous year, and CT reports corresponding to 10% of the annual data have been retrieved from the information systems and referral forms of six radiology departments in different European countries.

Data pre-processing included coding the medical specialties, the age groups, anatomic regions, and most important coding of the diagnoses from medical details mentioned in the reports. The resulting database includes 70041 CT examinations, of which 54127 were referred by medical specialties concerning 33149 patients. To learn from these data, descriptive analyses have been performed.

4. Conclusions

CT examinations are predominantly performed on patients in the mid- and higher age categories. The highest referrals are by oncology; followed by surgery, internal medicine, neurology and neurosurgery. A substantial number of patients received more than 6 CT examinations in 1-year, mostly for oncology. Most frequent diagnostic categories are neoplasms; followed by diseases of the musculoskeletal system, vascular system, respiratory system, digestive system, urinary tract, and nervous system.

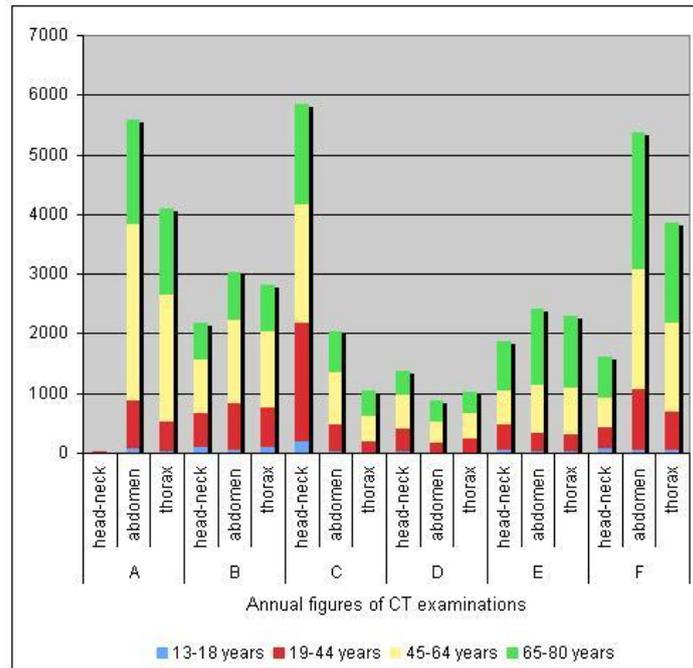
[see: \[annual figures ct.jpg\]](#)

[see: \[more than 6 ct in one year.bmp\]](#)

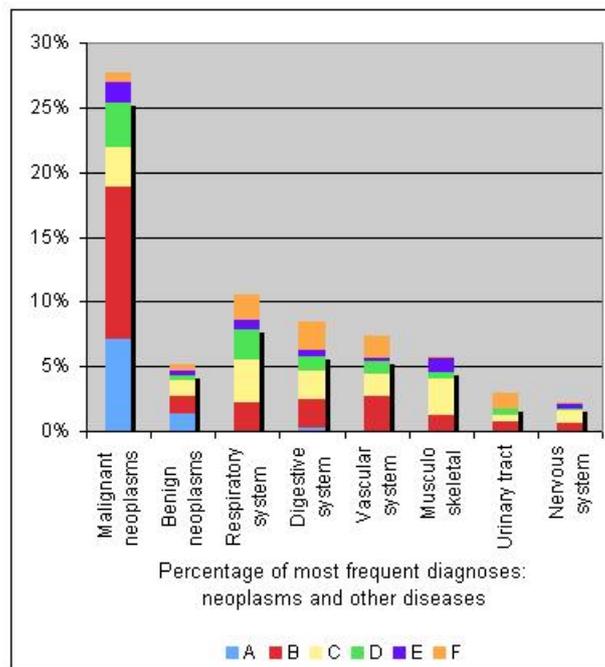
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5. Mediafiles:

annual figures ct.jpg



diagnoses.bmp



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