



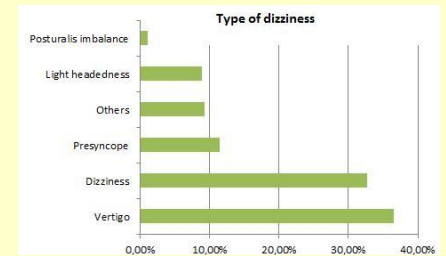
## INFLUENCING FACTORS TO PERFORM COMPUTED TOMOGRAPHY IN PATIENTS WITH DIZZINESS IN A HUNGARIAN EMERGENCY DEPARTMENT

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### Facts of dizziness

- One of the most frequently examined symptoms on the Emergency Departments.
- Dizziness is associated with a variety of neurological, otological, psychiatric and cardiovascular conditions.
- It could point on more serious diseases like posterior fossa infarct.
- The onset and the existence of dizziness is quite often scary influencing the quality of life.
- Due to instability, it causes further falls with a wide variety of injuries.
- Unless new approach, for the accurate diagnosis after physical examination and lab test, head CT scan is still quite often performed.



### Objective

Our aims were to examine which factors influence to perform head CT scan in patients with dizziness.

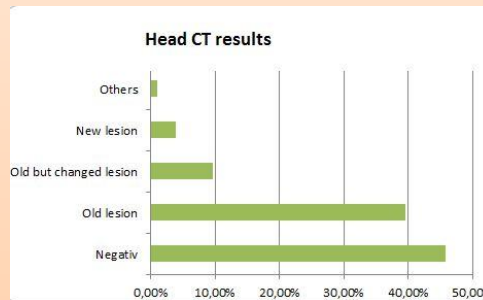
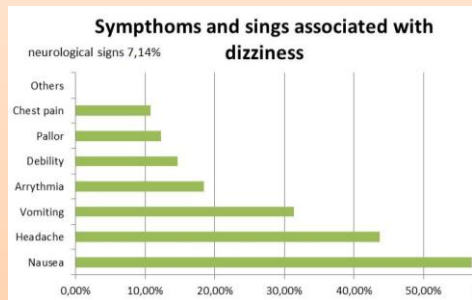
### Evaluation method

Retrospective study of 471 adult patients documentations between 01. 01. 2010 and 31.12. 2010 on the Emergency Department of Kaposi Mór Teaching Hospital. Exclusion factors: serious mental and sensory damage, GCS < 9, age < 18 years.

### Results

**In general :** 70,7% of all patients were wome. The average age was 58 years, the peak of the incidence of dizziness was between age 70 and 79 years. 61,57% of all patients were older than 60 years. The occurence was higher in May and in August in the same quantities (10,83%). Fridays (18,89%) for days.

- Of all patients, in 43.9% (209) was performed head CT scan.
- 13,4% (28) of these had CT scan showed obviously new damages (5,94% of all patients).



### Coherency was found between factors and CT indication

- Old age (over 60 years of age)
- Headache (except migrain)
- Pallor during physical examination (without hypotension)
- Medication (antipsyhotic medication)
- Neurological symptoms
  - Limb weakness or numbness, facial palsy, speech disorder
- Previous fainting
- Stroke and ischemic heart disease in the PMH

### Factors associated with performing head CT but not with abnormal CT images

- Older age, Present of headache
- Pallor skin
- Neurological signs (limb weakness or numbness, facial palsy, speech disorder)
- Previous fainting and stroke or ischemic heart disease in the PMH

### Factors associated with abnormal head CT scan

- Vision problem
- Continous dizziness without any known provoking factors
- The existence and type of present medication (antihypertensive medication, NSAID's muscle relaxant, anxyolytic and antivertigo drugs)

### Conclusion

- Most syndromes of dizziness can be correctly diagnosed only by means of a careful medical history and physical examination of the patient. The deficiency of basic neuro-ophthalmological and neuro-otological examinations often lead the ordering of neuroimaging test.
- Even new viewpoint emphasises that CT performance is not in front line of diagnostic steps to identify underlining cause of dizziness any more, the fear of misdiagnose any serious or life-threatening disease is still prevails and leads head CT ordering in our Emergency Department.
- To performed a risk score to predict adequate indication of head CT scan in patients with dizziness need further investigations but vision problem and continuous dizziness without any provoking factors are worthy of consider as a factor.

**The future** is to follow „HINTS” examination to reduce misdiagnosis of patients with stroke in acut vestibular syndrome.

HINTS to diagnose stroke in acut vestibular syndrome: Three-Step Bedside Oculomotor Examination More Sensitive Than Early MRI Diffusion-Weighted Imaging Jorge C. Kattah, Arun V. Talkad, David Z. Wang, Yu-Hsiang Hsieh and David E. Newmann-Toker, Stroke. 2009;40:3504-3510;originally published online September 17, 2009 doi:10.1161/STROKEAHA.109.551234