



University of Goce Delcev - Stip



**First International Students
Congress in Dental Medicine
- 2018**

**DIGITAL VS
ANALOGICAL
IN DENTAL
MEDICINE**

Stip, Republic of Macedonia

28.03-29.03.2018

Multimedia centre, Stip

Theme 11	Hand tracing vs. digital methods of cefalometric analysis Author: <u>Magdalena Koceva</u> , Co-author: Ana Trajkovska Mentor: Sandra Atanasova, Co-mentor: Verica Toneva
Theme 12	Anatomical and morphological variations of the maxillary lateral incisor Author: <u>Teodora Seneva</u> , Co-author: Marija Risteska Mentor: Kiro Papakoca, Co-mentor: Marija Hadji-Vasileva
Theme 13	The manufacture of inlays throughout the dental clinics in the Municipality of Shtip Author: <u>Petar Joleski</u> , Co-author: Stefan Nanev Mentor: Natasa Longurova, Co-mentor: Katerina Zlatanovska
Theme 14	Tooth discolorations after dental interventions Author: <u>Aleksandra Markoska</u> , Co-author: Izabela Brsakoska Mentor: Natasha Longurova, Co-mentor: Sandra Atanasova
Theme 15	Composite laminates for a perfect smile Author: <u>Verica Saikarova</u> Mentor: Ljupka Lazarova, Co-mentor: Sandra Atanasova
Theme 16	Use of the teeth whitening procedure by dental medicine students Author: <u>Zorka Gjorgieva</u> , Co-author: Sara Talevska Mentor: Natasha Longurova, Co-mentor: Verica Toneva
Theme 17	The most common reasons for toothache Author: <u>Natalija Gorgieva</u> , Co-author: Lidija Angova Mentor: Verica Toneva, Co-mentor: Sandra Atanasova
Theme 18	TMD disorders among dental students Author: <u>Martin Treneski</u> , Co-author: Hristijan Dimovski Mentor: Terzieva-Petroska Olivera, Co-mentor: Petrovski Mihajlo
Theme 19	Mineral trioxide aggregate material use in dental pathology Author: <u>Anita Kirova</u> , Co-author: Frosina Pandova Mentor: Natasha Longurova, Co-mentor: Ivona Kovachevska
Theme 20	The anatomo-morphological differences between primary and permanent teeth Author: <u>Spase Sulev</u> , Co-author: Andon Stojkov, Mentor: Sanja Naskova, Co-mentor: Verica Toneva

13:00-14.00

LUNCH BREAK

Hand tracing vs. digital methods of cefalometric analysis

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Abstract

Introduction.Cephalometric radiography is an essential tool to orthodontists for studying growth and development of the facial skeleton, diagnosis, treatment planning, and evaluating pre- and post-treatment changes .Manual cephalometric analysis has been performed by tracing radiographic landmarks on acetate overlays and measuring linear and angular values. Rapid technological advances have made it possible to perform cephalometric tracing using computers where the landmarks are usually digitized first.

Materials and method.We reviewed several studies in which comparison was made between manual analysis and using computer software programs for cephalometric analysis.Digital films are transferred to conventional films using a printer. Printed films are hand-tracked and measured by one observer. Digital films are analyzed twice using computer software programs by the same observer, using basic and advanced features.

Results.From the reviewed scientific papers it is registered that the basic and the advanced feature procedures took significantly less time than the total time needed for the hand-tracing procedure. The basic procedure independent of the software took significantly less time than the advanced procedure. Small discrepancies were also found between hand-tracing and computerized measurements, but the differences are minimal and clinically acceptable.

Conclusion.Computerized technique can be regarded equally reliable to hand-tracing as far as cephalometric measurements are concerned. Time-saving characteristics of computerized tracing makes this method preferable to hand tracing for cephalometric analysis of radiographs used in diagnosis, treatment planning, and the evaluation of treatment outcome.

Keywords

Cephalometric analysis; Cephalometric radiography; Comparison studies Digital methods; Hand-tracing.