

# **Evaluation of a novel case-based Training Program (d3web.Train) in Hematology**

Doris Kraemer<sup>1</sup>, Stanislaus Reimer<sup>1</sup>, Alexander Hörnlein<sup>2</sup>, Christian Betz<sup>2</sup>,  
Frank Puppe<sup>2</sup>, Christian Kneitz<sup>1</sup>

<sup>1</sup> Medizinische Poliklinik der Universitätsklinik Würzburg, Klinikstr. 6-8, 97070 Würzburg

<sup>2</sup> Lehrstuhl für Informatik VI der Universität Würzburg, Am Hubland, 97074 Würzburg

**Corresponding author**

**PD Dr. med. D. Kraemer**

**Medizinische Poliklinik der Universität Würzburg**

**Klinikstr. 8**

**97070 Würzburg**

**Germany**

**Phone : (49) 931 201-36163**

**Fax : (49) 931 201-36286**

**e-mail : Kraemer\_d@medizin.uni-wuerzburg.de**

## **Abstract**

The new media such as the internet and digital imaging offer new opportunities in medical education. In addition to conventional lectures we developed a case-based simulation training program of 17 hematology cases using the novel training system d3web.Train. We evaluated the assessment of this internet course by medical students, as well as their results in the hematology exam.

From a group of 150 students, 47 worked through at least one case and solved 435 cases in total; in average these students solved 9.5 cases. 18 different students filled in the questionnaire about the training system and 68 questionnaires about individual cases. The main results were: the students found the cases very helpful ( $1.5 \pm 0.6$  on a scale from 1 = very helpful to 5 = not at all), the training system very good ( $1.4 \pm 0.5$  on a scale from 1 to 6) and want to work with it further ( $1.2 \pm 0.4$  on a scale from 1 to 5). During the final examination, those 16 students, who answered that they had solved more than 5 from the 17 cases, scored significantly better (two-sided t-Test,  $p < 0.01$ ) in the hematological part of the exam than those 34 students solving 0 to 5 cases.

To our knowledge this is the first student evaluation of a case based training program in general hematology. The d3web.Train system offers a new and great tool for creating a training program in a reasonable amount of time, since it is able to process available patient records.

## **Key words**

Educational Measurement – Patient simulation – Problem-based learning - Hematology