



## A study of formation and storage of laboratory results based on HL7 Clinical Document Architecture Standard

Hyung Hoi Kim<sup>1, 2</sup>, Shine Young Kim<sup>2</sup>, Hwa Sun Kim<sup>1</sup>, and Hune Cho<sup>1</sup>

<sup>1</sup>*Dept. of Medical Informatics Kyungpook National Univ., Republic of Korea*

<sup>2</sup>*Dept. of Laboratory Medicine and Biomedical informatics, Pusan National Univ., Republic of Korea*

### Abstract

**Background:** The Hospital Information System is used independently to other hospital information system, so Interoperability had been excluded. Clinical Document Architecture was applied in this study to maximize management of inter-hospital result information about bone marrow study and CBC test. For this, we suggested that template composition and schema design for test results of HL7CDA. **Methods:** After we defined template and item criteria of bone marrow and CBC test, we designed XML schema and created effective CDA documents. Schema was analyzed based on HL7 Reference Information Model and HL7 V2.4 was used for transporting protocol. **Results:** 1) It is the first trial to apply the definition of CDA for laboratory result in Korea as the basis. 2) It accomplished an expansion and purification of international standardization so that it could be applied to domestic standardization. 3) It represented the structure of future hospital systems based on the CDA. **Conclusion :** The study for CDA makes it possible that Clinical Data Repository which is knowledge based storage of evidence oriented medicine and Electronic Health Record in future. At this point of time, it makes possible to share information about lab finding which is very important evidence to clinical physicians for diagnosis between variable health medical institutions.