
APAMI2003 Tutorial on Standardization

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In this tutorial

- What is standard?
 - Std on medicine, and medical information
- What are for MI standards?
 - Code, Syntax, etc.
- HL7, DICOM, IHE
- Multi-byte characters on Std's
- ISO/TC 215 activities

What are standards?

- Video standards

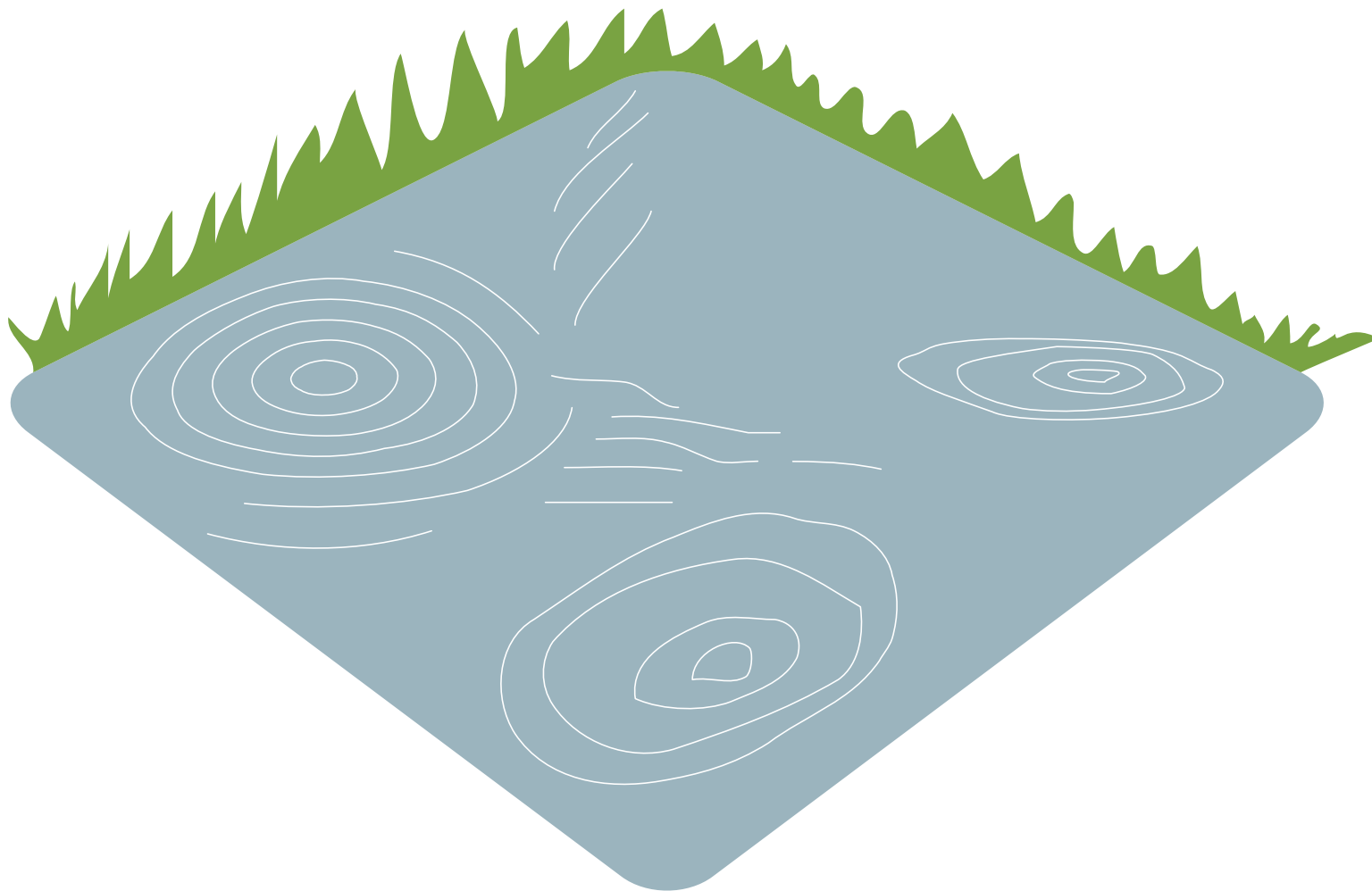
- U-matic, V-CORD, β (beta), VHS, 8mm (analog, VHS-C, DV, DVD-video (DVD-R, -RW, +R, +RW, -RAM)

- MIDI for digital music

- What we have for medicine?

Without standards, we can't

- exchange patient information between healthcare providers
- upgrade/replace HIS without risk of data loss, without paying for master file translation
- have statistics on operations performed in a hospital.



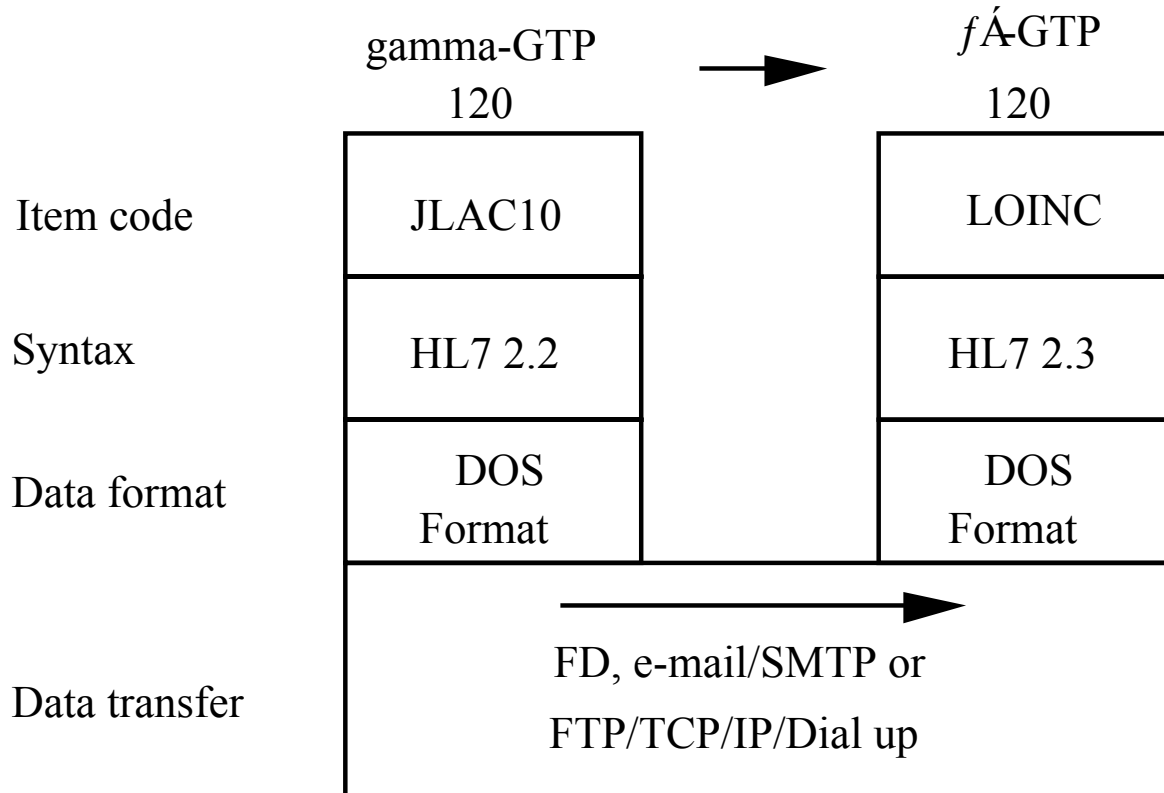




Std. in Medicine

- Standardized medical practice
 - guidelines, templates,
- Standardized information
 - patient data exchange, archive, data analysis,

To exchange data between database



- Media
 - File format
 - Syntax
 - item code
- All should be agreed.

Human eye and computer's eye

- γ -GTP=120 gamma-GTP=120
 - We must have common item code
 - JLAB code : 3B0900000023271
- 3B035000002327201,50,U,6,38,H
 - Next, where is item code, value, unit, high/low?
 - HL7 format
 - OBX||NM|3B035000002327201^GOT^JC10||50|U|6-38|H||N|F
 - “In XML form” is not enough. (It is like “in 8-1/2 x 11 form, single space”).

Std. in Medical information

- Item codes

- disease classification,
examination, drug,
operation/intervention, basic
ID information

- Syntax

- HL7, DICOM, JPEG,

dream” in disease classification

- Two disease master file in Japan
 - For clinical use and for reimbursement
- For reimbursement : “Myocardial infarction”
- ICD : “Acute M.I.”
- DRG : “Myocardial disease, 14yo or younger, no complications, no AC bypass operation”
- SNOMED : “Necrosis of myocardia”
- Clinically : “Frontal wall M.I.”

Codes

- DIsease

- ICD-9-CM, ICD-10, DRG, MEDIS disease masterfile 2.1(in Japan)

- Clinical examination

- LOINC, JLAC, CPT-4, CPT-5,

- Pathology

- SNOMED

- in Japan

- Image examination : JJ1017

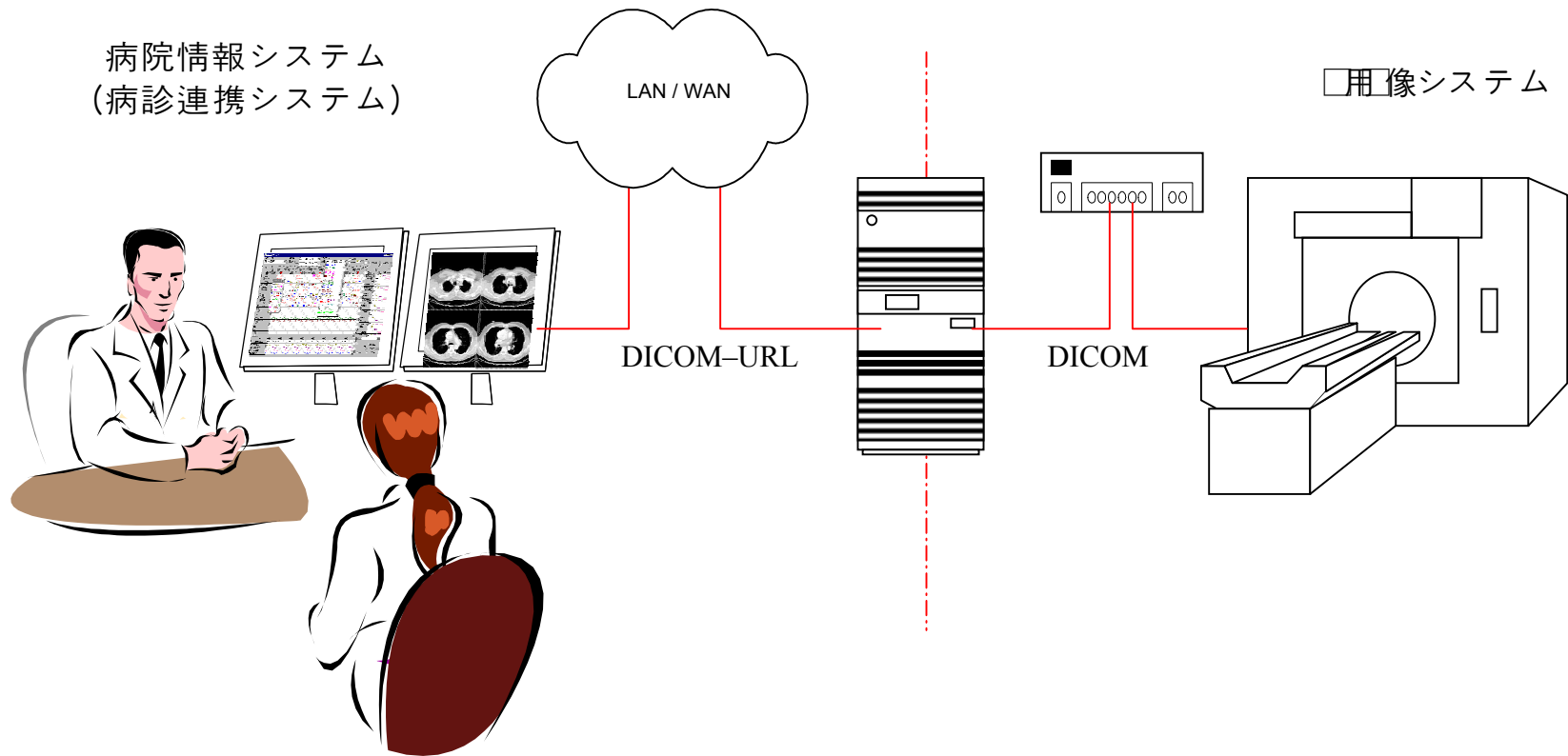
- Drug : HOT

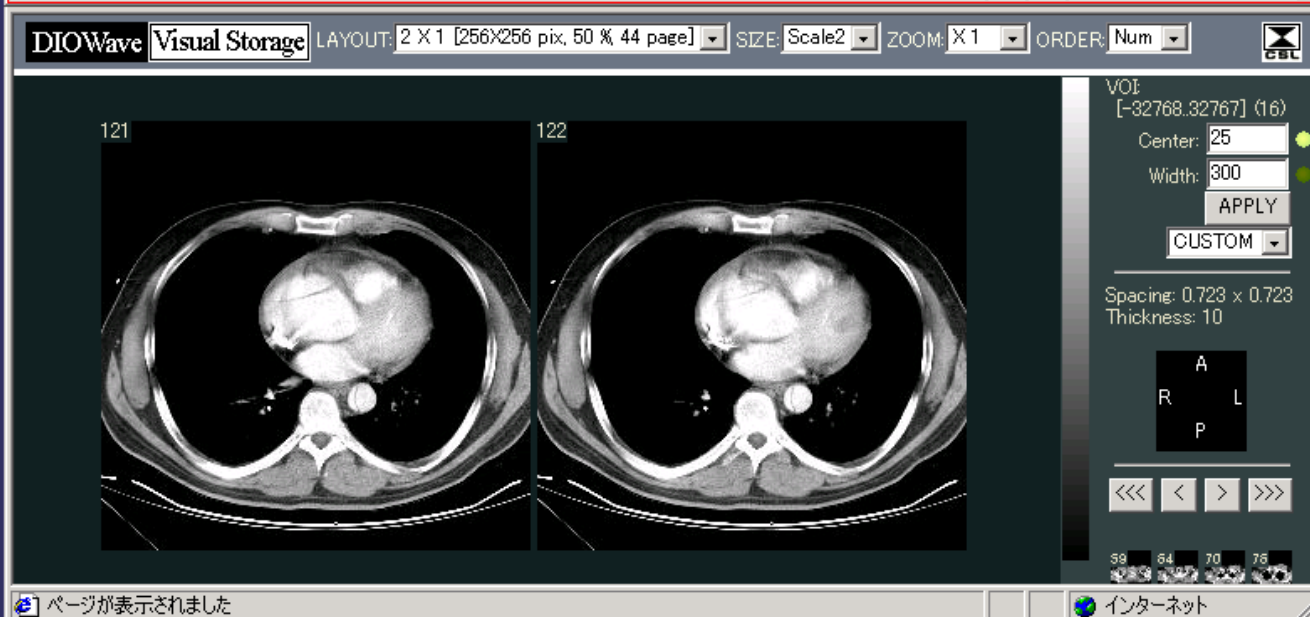
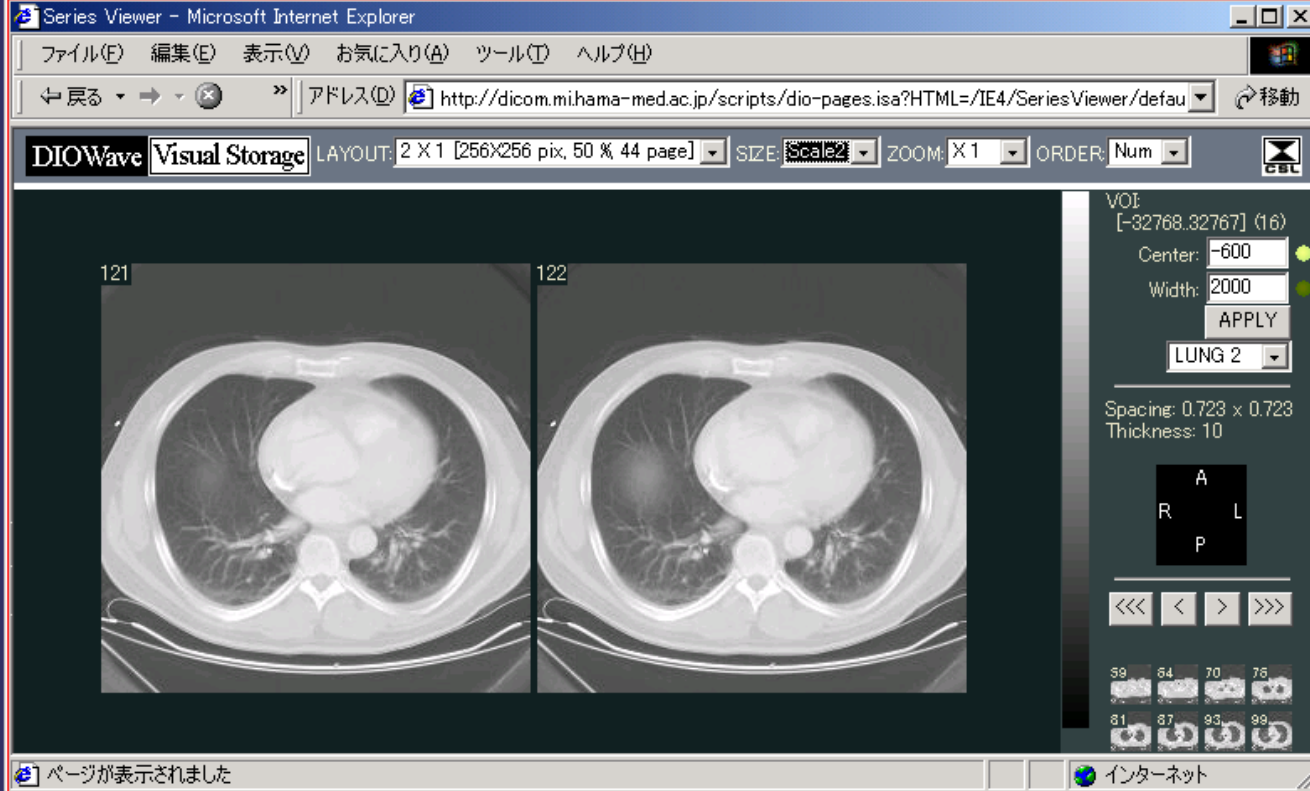
- EMR tags : J-MIX

Syntax

- HL7
- DICOM
 - (20th anniversary)
- IHE, as HL7+DICOM
- Wave form (ECG, etc.)
 - SCP-ECG, Minnesota codes, MFER

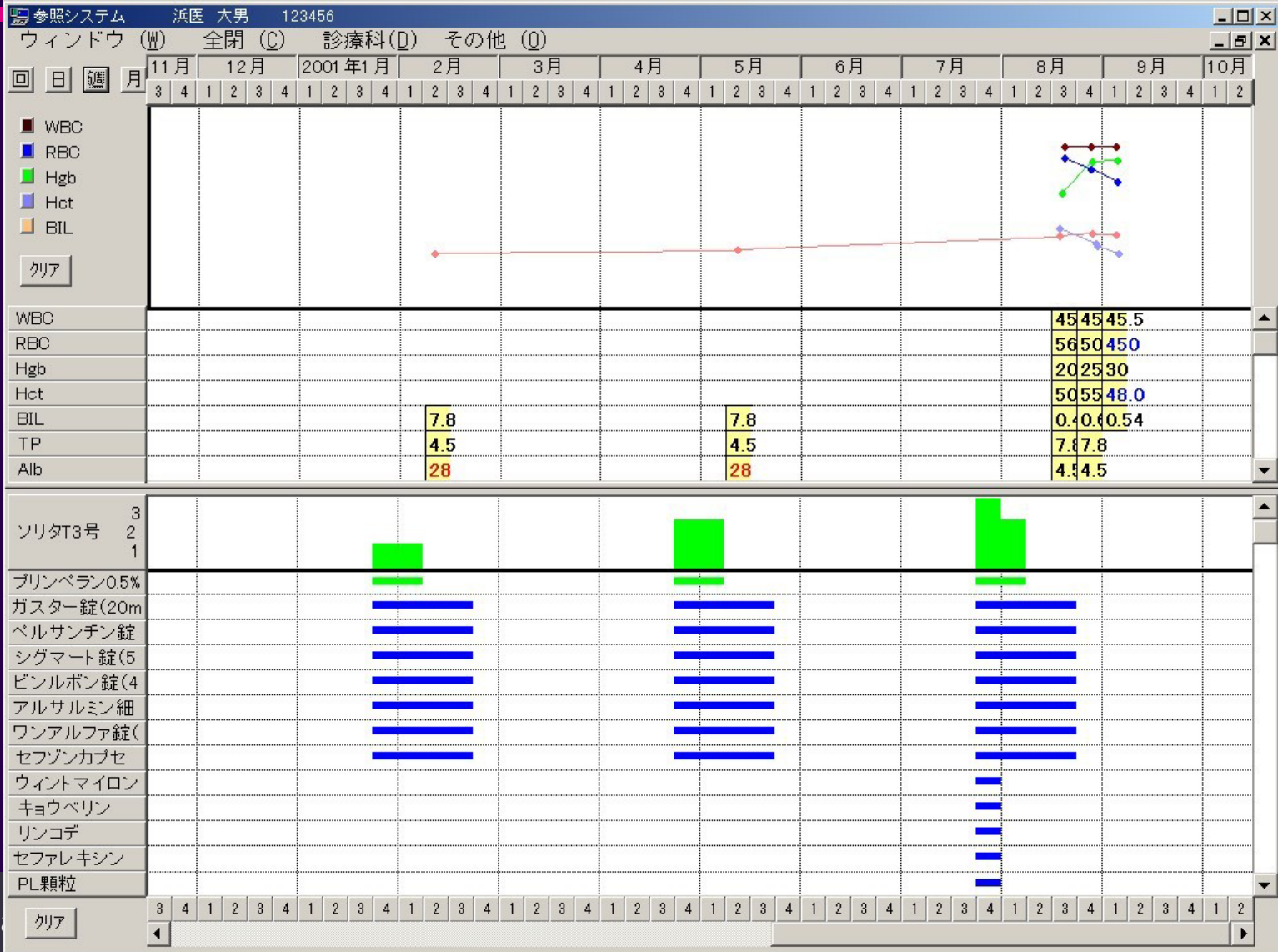
Hamamatsu Univ. hospital wide PACS





Viewing images on HIS
terminal (DIOWave)

classification history DB at HMU



Lab and Px DB warehouse at HMU



ISO/TC 215 Health Informatics

- Est. 1997
- Vienna treaty with CEN (Comite Europeen du Normalisation)
- TBT (Treaty on Barrier of Trades) of WTO
- Co-(C) pilot program with IEEE, HL7

ISO/TC 215 WG's

- WG1 Modeling
- WG2 Message & Communications
- WG3 Vocabulary
- WG4 Security
- WG5 Health cards
- WG6 e-Pharmacy
- Chairman's advisory

Standardization should not be

- Too early
 - IEEE medix model
- Too late
 - MEDIS lab data exchange
- Too deep
 - ACR-NEMA v.1, SCP-ECG
- Too shallow
 - ICD
- Too narrow
 - ACR-NEMA v.1
- Too wide
 - All the EHR std's?

End of presentation

■ Further information

➤ dicom.nema.org

➤ www.hl7.org

➤ www.iso.ch

➤ www.mi.hama-med.ac.jp/standardization.html

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