E The functions supporting patients' care, such as various patient instruction (nutrient treatment, medication, etc.), planning of inpatient treatment, preparing and execution of various types of conferences, clinical trials, etc. are necessary. Also, the displaying function of the time-series feature or progress, and the reference function of order and contents are required.

F The system should have two-factor authentication, including password and biometric authentication for user identification, and also functions necessary for avoiding medical risks, including patient identification using patient identification, ID card, wristband, etc. Besides, it should have a clinical decision support system (CDSS), informing alerts and reminders.

G The system should have a function that lets issued instructions of various orders, including clinical pathways, to be checked intensively and entered the record at all PC and portable terminals such as Handy Terminals or smart devices.

H The system should be able to create, apply, and implement clinical pathways using both of the electronic medical records function and the ordering functions. Also, it should correspond to support dental/oral surgery treatment. The Vendor shall also propose support systems for patients who get genetic medicine under strict information security management.

I The system should provide functions to support medical reception, reservations (clinical practice／tests／treatment including chemotherapy, etc.), creating medical records including the emergency first-aid treatment, and history taking using smart devices, etc. Also, it should have an outpatient call function by the information of the outpatients' list using an individual patient's smartphone or a unique device connected to a digital signage system for waiting rooms.

J The function of the proxy inputs by medical clerks and their approval based on doctors' instructions. It also should have an approval system of the medical recording by the medical students or residents by their instructors (namely, countersigns) according to the practice level of them as well as a function of referring and revising.

K The medical accounting system should support to generate billing corresponding to the volume of pieces and comprehensive (DPC) evaluation for each insurance type. Also, propose insurance card confirmation corresponding to "My Number Card".

L Digitizing function of the paper documents from outpatients, wards, departments such as letters of referrals, and imports data of DICOM images or laboratory tests equipments. Also, handwritten documents, images, waveform information, etc. that had been saved in an appropriate format such as PDF, JPEG etc. are centrally managed in the same way as other input information. Besides, various documents, reports, and scan documents created by this system or other department systems should be centrally stored and managed as medical record documents that enable easy reference, and notify the unread documents by the integrated management function.

M Open system for multi-vendor and multi-platform, based on the standard such as DICOM, JPEG, MPEG2, MFER for file format, and HL7 and XML for message exchange (both are upward compatible.).

N The hospital network consisting of a redundant configuration up to the backbone, and each floor switch should be built at a guaranteed sufficient speed and connected to the University's existing network (on-campus network). Also, propose a function that allows inputting external data to HIS or output permitted clinical data as encrypted files to terminals on the outside network on keeping a transaction history. Besides, proposals should be made for SDN (Software-Defined Networking) and support for 5G wireless environments.

O Data Ware House (DWH) system should accumulate all existing clinical data such as medical／order／nursing records etc. for secondary use in research, education, and business analysis. At that time, periodic verification (validation) to confirm the quality, such as lost data, should be necessary. In addition, a versatile database for secondary use should be included that can be easily used regardless of the type of data stored in HIS. Also, the information should be subject to the current HL-7 CDA and JAHIS exchange rules. Besides, since the HL-7 FHIR standard has been developed, proposals should be made for the corresponding output.

P The system should support for creating referral letters and return letters, as well as copying summaries of admission records, referral letters, related test results, and arbitrary images, etc., on portable media with security functions. It also should be able to share the clinical information in the regional EHR system through the gateway function.

Q The system should be able to extract related information and output them to enable input support in various disease registration projects such as regional／in-hospital cancer registration and NCD.

R Server group configuration and the server／client configuration should be based on virtualization technology, and that the quick response, as well as the fault tolerance, can be ensured. In addition, it must have a function to perform a reliable and low-delay backup to remote locations in case of a disaster. In addition to server／client type terminals using general FAT terminals, some business terminals should be made into thin-clients (terminals) by virtualization (so-called Server-Based Computing : SBC and Virtual desktop infrastructure : VDI).

S The system must have a clinical training support function for medical students and external trainees.

T The billing system must be connected to automatic payment machines linked to a credit card or various electronic money with a medical billing system for payment of various charges.

U The system must have a digital signage (electronic bulletin board) function for the outpatients' areas and wards to share the hospital information to patients. Also, a provision function of patient care information linked to the bedside table monitor should be proposed. To enhance patient amenity functions, vendors should propose for KIOSK terminals, electronic bulletin board functions, and sending functions of various information related to the practice to smartphones held by patients.

V The vendor should propose for RPA (Robotic Process Automation) supporting the medical practice by the medical clerk and the nursing service.