BONE MARROW TRANSPLANTATION PROGRAM
UNIVERSITY HOSPITAL OF PATRAS

HEMATOPOIETIC CELL TRANSPLANTATION PROGRAM

QUALITY SYSTEM

Quality Management System Manual

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1. Contents

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2. ACRONYMS AND DEFINITIONS

Definitions:

- **Quality Management Plan (QMP)** is a manual that gives an overview of the governance of the BMT-Program in national and local level as well as of the quality management system that has been developed locally in order to ensure implementation of quality and improvement in the providing services. It presents the strategy of the Department in quality as well as the techniques used to achieve this purpose**.**
- **Quality Management System (QMS)** is a system of procedures and documents developed in order to control the quality and the continuous improvement of the providing services
- **Standard Operating Procedures (SOP)** are documents which describe the regularly recurring operations. The purpose of a SOP is to carry out the operations correctly and always in the same manner.
- **Manual** is a concise reference book providing specific information about a subject
- **Protocols** are documents of standardized methods for implementing tasks together with the individuals responsible for each task implementation.
- **Policy** is a plan of guiding principles directing decisions in the Transplant Program. Policies are included in protocols.
- **Forms** are the printed pre-structured documents which are the structural components which are used to collect, handle or transfer and finally process of data and information supporting the day-to-day implementation of tasks, activities and procedures**.**
- **Template** is a file that serves as a starting point for a new document. Each template is used according to clear instructions that follow it.
- **Instructions** are documents with information and directions for people performing certain tasks.
- **Leaflets** are documents with information aim to people not familiar with the Transplantation Program.
- **Information Technology (IT) Systems** are systems used to support aspects of the operation of the QMS.

ACRONYMS

QMS:	Quality Management System
QMSM:	Quality Management System Manager
HCTU*:*	Hematopoietic cell transplantation unit
NTO:	Hellenic Transplant Organization
NBDC:	National Blood Donation Center
HCC:	Hemovigilance Coordination Center

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EBMT:	European Blood and Marrow Transplantation
HCH:	Hellenic Society of Hematology
SOP:	Standard Operating Procedures
CIBMTR:	Center for International Blood and Marrow Transplantation Research
GHPU:	General Hospital of Patras University
HTO	Hellenic Transplant Organization
EBMT	European Blood and Marrow Transplantation
HSH	Hellenic Society of Hematology
CIBMTR	Center for International Blood and Marrow Transplantation Research

3. Introduction - Purpose of QM Plan

The purpose of Quality Management Plan is to describe how the BMT Program (BMT-P) of the University Hospital of Patras is organized and managed to conform to national and international legislation and standards in relation to patient and donor management as well as product collection, processing, testing, storage, section and release.

The pursuit of quality is a key objective of the University General Hospital of Patras, but also a central element of its strategic planning.

The adoption and implementation of a Quality Management System, combined with the activation of staff and partners, teamwork and the cultivation of the appropriate culture, contribute to the achievement of the goals of the Hematopoietic Cell Transplantation Unit, today and in the future.

The Quality Management System has been designed and developed in accordance with modern quality management requirements and techniques resulting from:

- The internationally most recognizable quality standard for bone marrow transplantation and hematopoietic cell transplantation programs, FACT - JACIE
- The current regulations, policies and procedures of the Hematology Department.
- The current institutional framework that governs the operation of the University Hospital of Patras.

During the design of the system, emphasis was placed on its contribution to the continuous improvement of the transplant program based on the changing needs that will emerge due to changes in the internal and external environment.

This manual is a guide for the implementation of the Hematopoietic Cell Transplantation Quality Management System and includes its strategic approach to quality, describes in general terms the system and its management methods.

Its purpose is to guide the staff participating in the transplantation program to properly handle the system and adapt it continuously, improving its efficiency and effectiveness for the benefit of patients and donors.

The manual is made available to internal and external parts to demonstrate the ability of the departments of the Hematology Department involved in the transplantation program to meet the requirements of the FACT - JACIE standard, the legislation, but also those set by the QMS itself to achieve its objectives.

4. SUMMARY OF THE BMT PROGRAMM (Stand 2021)

4.1. Short description, History, Activities

The **University Hospital of Patras (UHP)** build in 1988) is a National Health System (NHS) referral Hospital for the 6th Health Region of Greece (South and Western Greece, approx. 2 Million citizens) housing all medical specialties and relevant departments in its 700 beds. It is located in the University campus near the Medical School of the **University of Patras (UoP)**. The BMT Program www.bmtpatra.gr/) started to operate in 1997 within the Hematology Division of the UHP (Head of the Program Prof. N.C. Zoumbos) with the co-operation of the **Apheresis and Processing Facilities** (Head Prof. Maniati) which are belonging to the Blood Center (Transfusion Medicine). The first autologous transplantation was performed in 1997 and the first allogeneic transplantation was performed in 1999. In the first years of operation between 1997-2005, a total of 77 autologous and 26 sibling allogeneic transplants were performed. In 2006, Dr. Spyridonidis joined the UoP as the new Director of the BMT Unit. The first unrelated allogeneic transplant was performed in 2006. After successful audit in 2008, the BMT Program received from the Hellenic Ministry of Health the permanent licence for autologous / related and unrelated blood stem cell transplants, which now according to the new legislation should be renewed every 3 years. In 2010, the Centre of Bone Marrow Donor volunteers - University of Patras **CBMDP – "Save a Life"** https://www.xarisezoi.gr/) was established as part of the BMT Unit and within the University of Patras (member of the World Marrow Donor Association WMDA since 2014) which now counts nearly 80.000 donors volunteer donors in its database, enlisting an average of >10,000 new donors/year through its large network around Greece (>40 recruitment hubs) and having provided nearly 200 grafts to patients in Greece and abroad. In 2011, the collection facility was FDA registered. In 2014, the Unit was completely renovated (designated inpatient HEPA filtered unit, 4 rooms, day clinic, 136,32 m^2, 381,7m^3) www.bmtpatra.gr/. In 2021, the Institute of Cell Therapy (ICT) (www.ictpatras.gr, https://lnkd.in/eRF6YBUx) was established within the UoP and a new GMP Facility and cryostorage facility was constructed in the new building of the Medical School (attached to the UHP) (10136,32 m^2 Grade D, C, B rooms, Glove box, continuous electronic environment monitoring system including particle counters). According to an agreement between UHP and ICT/ UoP we are currently in the process of transferring the processing facility of the Blood Center to the new GMP facilities of the ICT. More recently, since 2021 the center was approved by Kite Gilead for Yescarta and since 2022 by Norvartis for Kymriah CART cell therapy.

Activities (Stand 2022)

Clinical Unit:

- From 2006 to 2021 (nearly 13 years period, 1 year off due to sabbatical of the director in NIH/ Bethesda and 6 months off due to renovations of the BMT Unit) a total of 332 allogeneic (MSD 109, WMUD 103, MMUD 87, haplo 32, CB 1) and a total of 140 autologous transplants have been performed.
- From 2019 to 2021, despite the pandemic, 98 allogeneic (MSD 20, WMUD 40, MMUD 20, haplo 18) and 16 autologous transplantations have been performed. Patients are routinely referred to our Unit for allogeneic transplantation from all Hospitals in 6th Health region (Southwestern Greece, approx. 2 Million citizens) but also from Athens (200 km distance) (Laiko University Hospital, Attikon University Hospital, Alexandras University Hospital, Gennimatas Hospital, Ippokration Hospital) and other parts of Greece (eg University of Alexandroupoli). Between 2019-2021, 30% (29 pts) of allogenic transplants were performed for internal patients, 25% (24 pts) were referred from other Hospitals of the 6th Health region and 45% (44 pts) were referred from other parts of Greece. Patients referred from long distance remain at least 3 months after transplant near the Hospital for follow-up (housing in a designated apartment, gift from Aurora foundation). Transplant data are annually reported to Hellenic transplant Organization (HTO), to EBMT (CIC 281, the Unit was audited for data collection from EBMT in 2008, Promise database), to the Center For International Blood and Marrow Transplant Research (CIBMTR 11075, according to a signed specific agreement valid since 2008) and to Hellenic Society of Hematology (HSH).

Collections:

- From 2000 to 2018 in total 727 collections (procedures or bags collected) [autologous PBSC 461, autologous BM 1, related PBSC 32, related BM 13, HELLENIC-VUD PBSC 22, HELLLENIC-VUD BM 1, HELLLENIC-VUD DLI 3]
- From 2019 to 2021 (3 years period) in total 78 (procedures or bags collected) [autologous PBSC 40, autologous BM 0, related PBSC 163, related BM 30, related DLI 24, HELLENIC-VUD PBSC 40, HELLLENIC-VUD BM 5]

Processing:

- From 2000 to 2018 in total 2.873 bags were crypreserved, at least 20 Plasma / red cell depletions, 148 products/bags were imported and processed for further release
- From 2019 to 2021 (3 years period) 825 bags were cryopreserved [autologous PBSC 132, related DLI 184, VUD PBSC 87, VUD DLI 762], 5 Plasma / red cell depletions, 64 products/bags were imported and processed for further release

4.2. Organization of Transplantation Program

The Transplant Program is structured to meet the requirements of the FACT-JACIE standard, the applicable Greek legislation, and best practice to serve the unit's goals.

The transplantation program is performed from the following sections:

- Bone Marrow Transplantation Unit
- Collection Unit (within the Blood Center)
- Processing Laboratory (within the Blood Center). Currently at transfer to the GMP facility of the Institute of Cell Therapy (ICT)

The direct line management at national level within NHS and within the University Hospital of Patras of the above departments is illustrated in the organization chart.

The management line of the clinical BMT, of the collection unit and of the processing laboratory is depicted in the following charts. In detail, the organization of the transplant program and the job descriptions for all staff working in the program are presented in the RM-OR-MNL-11 CLINICAL PROGRAM ORGANIZATION and RM-OR-MNL-12 ORGANIZATION OF COLLECTION – PROCESSING DEPARTMENTS. This details the responsibilities and duties, the training requirements, experience, and skills per job. Thus, it is understood how participants in the program interact, collaborate and perform the necessary tasks in order to achieve the objectives of the program.

4.3. Operational overview

In detail, the operation structure of the transplant program is presented in the RM-SP-MNL-10 OPERATION SPECIFICATIONS OF THE HEMATOPOIETIC CELL TRANSPLANTATION PROGRAM. The clinical, collection and processing facilities are in close vicinity in the same building. Aiming at the uninterrupted operation of the transplant program, the above sections work closely together, have implemented a common QMP and QMS and are coordinated by the Director of the Clinical Transplant Program. There is regular interaction between the facilities based on interdisciplinary meeting schedules. Electronic tools of direct communication include the use of slack channels (Slack software).

All transplantations are performed within the HEPA-filtered isolated rooms of the BMT ward (5th floor). Follow-up of the patients is performed in the BMT Daily Clinic (4 beds) which is direct outside the BMT ward and operates daily. When needed, post-transplant complications are managed within designated rooms (1 single, 1 double) of the Hematology Unit (4th floor). At least two transplant-experienced hematologists and one resident are affiliated to the BMT unit and their work is supported by a transplant coordinator, a data manager and two secretaries for patient and administrative issues. Another 5-8 hematologists and 3 residents of the Hematology Division support the Program with on call duties.

The collection facility performs HSC and DLI collections from autologous, sibling and volunteer allogeneic donors. The processing procedures are related to: a) cryopreservation and freezing b) process bone marrow grafts c) reduction of plasma volume and removal of RBC from bone marrow grafts. The product tracking from the donor to the recipient or final distribution is achieved by labeling policy (Eurocode and SEC) and by IT documentation (G-Blood laboratory information management system (LIMS) for cell product tracking). Cell transportation between facilities is performed with validated transfer boxes with continuous measurement of temperature (fresh products) and dry shippers (freezed products).

In addition, the BMT Program is directly supported by:

- The necessary physicians and services of other departments of the hospital, described in detail in RM-SP-MNL-10 OPERATION SPECIFICATIONS OF THE HEMATOPOIETIC CELL TRANSPLANTATION PROGRAM.
- The FACS and BMT Laboratory (Head: Prof. A. Spyridonidis) which was established in 2006 and performs FACS analyses, CD34+ measurement according to ISHAGE protocols and chimerism analyses (currently under EFI accreditation process).
- The Centre to Advance Public Awareness and Recruitment of Bone Marrow Donor Volunteers University of Patras (CBMDP, (http://www.xarisezoi.gr/) (Head: Prof. A. Spyridonidis) which is a non-profit local volunteer donor registry which besides recruiting donors, supports patients and families (financial support, housing for patients who are referred from other cities).
- The Institute of Cell Therapy (Head: Prof. A. Spyridonidis) (www.ictpatras.gr, www.pek.upatras.gr) with its integrated GMP Lab (https://lnkd.in/eRF6YBUx)

Third party agreements

For the purpose of carrying out specific activities of the transplantation program, the BMT Unit collaborates with specialized third-party centers and laboratories that provide high quality services. These include:

- Unrelated donor search is performed with the help of the Hellenic National Transplant Organization according to the greek law.
- Total body irradiation is performed in Ag. Savvas Hospital, Athens according to third party agreements.
- CD34 + positive selection with Clinimacs is performed at the Cell Processing Laboratory of the Pediatric Oncology Unit "Marianna V. Vardinogianni-Elpida", "Transplant Unit"
- An emergency plan for patients, donors and cellular product collection and storage in case of earthquake, fire or other major disaster is in place according to a signed agreement with the BMT Unit in Attiko Hospital, Athens.
- third party agreements with companies for supporting the IT systems (GI-Blood, Modus Document Management System, internet sites)

- third party agreements with certified couriers for transport of biological material

Overview of the QM system

The BMT maintains written standard operating procedures (SOPs) covering all protocols and procedures performed, including staff training and quality management. The BMT uses an electronic document management system (MODUS) to track, manage and store documents and keep records of the various versions created (server with Redundant Array of Inexpensive Disks configuration (RAID) which is hosted in the University General Hospital of Patras' IT department and is protected by the applied security standards of the hospital). Policies are in place for the training and continuous education and for monitoring of skills and competencies. There are procedures in place for transplantation outcome analysis, reporting and management of deviations (errors, accidents, adverse events). The QM system is monitored though regular meetings, internal and external audits and inspections. There are specialized *external Quality System Managers* who design the quality system, provide advice on compliance with standards and regulations, review and improve processes and ensure the implementation of process changes within the QM system. These are working closely with *local Quality System Managers* who provide Quality Assurance *(QA's)*, organize minuted meetings, categorize and prioritize review complaints and Incidents, review any potential SAEs or SARs with the Director of the relevant Facility, identify processes and items requiring validation, ensure the scheduled internal quality audits, ensures that factors which may affect safety and quality are identified, documented, investigated and that appropriate corrective and preventive action are taken.

The overview of the QM Plan is depicted in figure 4, see (Appendix III - Figure 3 - Overview of the QM Plan).

4.4. Organization charts

- The operational management of the BMT-Program is depicted in organization chart 2, see (Appendix III - Figure 1 - Operational organization of the BMT Program)
- The organization management of the BMT Program is depicted in the organization chart 3, see (Appendix III - Figure 2 - Organization chart of the BMT Program)

5. Management of human resources transplant program

Within the framework of the transplantation program, care has been taken for:

- ensuring the required qualifications of the staff and the program for the integration of the new worker into the unit (see RM-IN-SOP-56 INTEGRATION OF A NEW WORKER),
- the continuing training of staff (medical, technological and nursing) (see RM-TR-SOP-57 STAFF TRAINING).

- the annual assessment of staff competence (see RM-TR-SOP-57 STAFF TRAINING)

6. Cooperation with third parties

In order to carry out special activities of the transplant program, the BMT collaborates with specialized laboratories of third-party hospitals that provide high quality services.

The cooperation is governed by special service agreements, which are formed when required by the application of the RM-SU-SOP-76 SUPPLY process.

7. Quality Strategy

For the transplantation program, a key success factor is the high quality of services provided, which is based on the following axes:

- In the implementation of the provisions of the applicable legislation regarding the activity of the Organization:
  - Ministerial Decision Y4α/71720, Government Gazette 1043/22.7.2005, Definition of terms and conditions of operation of solid organ transplant units, Hematopoietic cell transplantation units and procedure for granting and withdrawing their operating license
  - Presidential Decree 26, Government Gazette 51A/24.3.2008, Harmonization of Greek Legislation with Directive 2004/23/EC of the European Parliament and of the Council of 31.3.2004 on the establishment of standards of quality and safety for the donation, procurement, testing, processing, preservation, storage and distribution of human tissues and cells (OJ L102/7.4.2004) and related Directives 2006/17/EC (OJ 38/9.2.2006) and 2006/86/EC (OJ L 294/25.10.2006)
  - Presidential Decree 93, Government Gazette 79A/12.4.2002, Qualifications and duties of Transplant Coordinators
  - Presidential Decree 129, Government Gazette 229A, 7.12.2016, Coding of human tissues and cells.
- The implementation of the requirements of the current FACT – JACIE standards.
- The implementation of the strategy and policies defined in the procedures of the Quality Management System.

8. Quality Management System

8.1. Purpose

The Quality Management System has been developed in order to:

- The achievement of the goals of the Transplantation Program

- Compliance with the quality policy, as well as with the applicable institutional framework
- The harmonization of the management of its activities with the requirements of the FACT - JACIE standard
- The continuous improvement of the procedures and techniques for the management and execution of activities within the framework of the Transplantation Program.

9. Structure of the Quality Management System

9.1. Generally

The Quality Management System of the Transplantation Program concerns all hematopoietic cell transplantation activities carried out by the Hematology Clinic of the University Hospital.

9.2. Process Model QMS

The main processes as well as the management processes of the Quality Management System, as well as the interactions between them, are presented in the following schemes.

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LIST OF SOPs

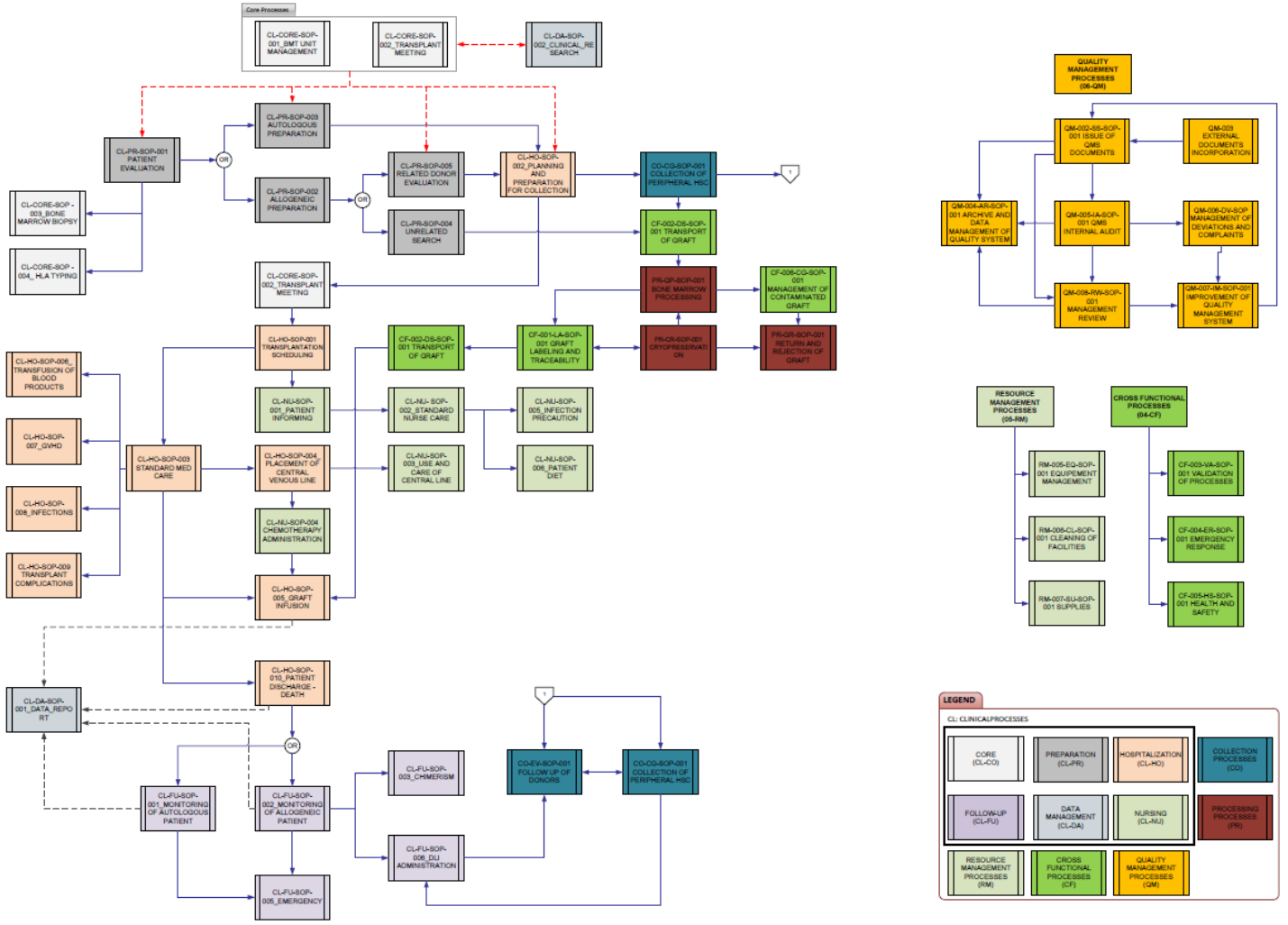

Figure 1: Main Quality Management System Processes

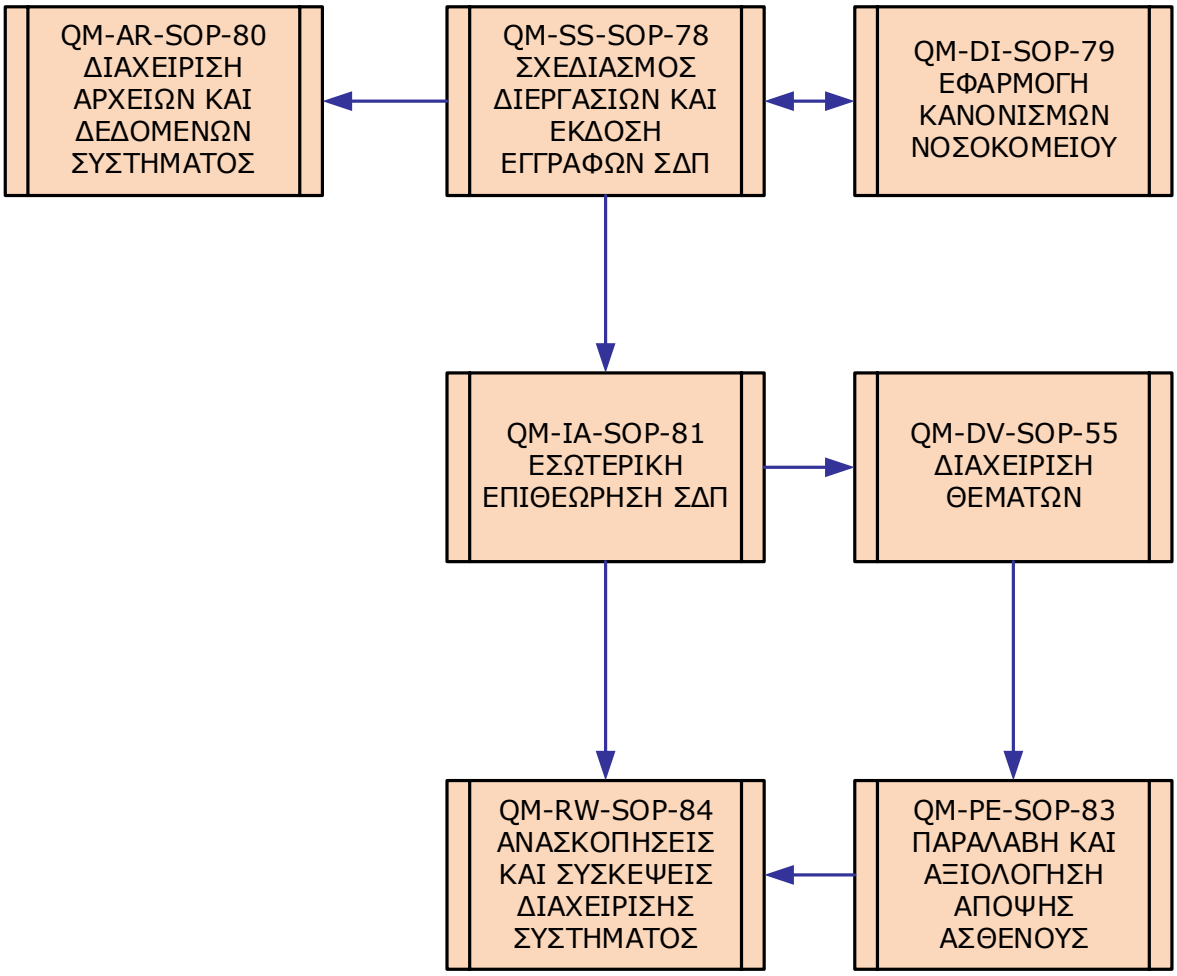

Figure 2: DBP Management Processes

9.2.1. Quality Management System Documentation

The extent of the documentation shall be entirely dependent on:

(a) the type and complexity of processes and their interdependencies;

b) the size and culture of the HCTU,

(c) the knowledge and skills of the staff;

d) the applicable institutional framework and the management rules at hospital level.

(e) the requirements of the FACT - JACIE standard

This handbook is the main guide to the use and operation of the QMS.

The structural elements of the Quality Management System are listed in the table below.

The Quality Management System has been structured in the following sections:

- CO (Collection): Collection activity module which includes the procedures and relevant documents of the activities:

- PROCEDURE FOR THE COLLECTION OF PERIPHERAL HEMATOPOIETIC CELLS
- FOLLOW-UP OF ALLOGENEIC DONOR AFTER COLLECTION

- PR (Processing): Module of the processing activity which includes the procedures and related documents of the activities:
  - GRAFT TREATMENT
  - CRYOPRESERVATION AND CRYOFEEZING OF CELLULAR PRODUCTS
  - RETURN AND DESTRUCTION OR RESEARCH USE OF GRAFT
  - STORAGE AND CRYOPRESERVATION OF CELLULAR PRODUCTS
- CL (Clinical) - Clinical activities which include the procedures and relevant documents of the activities:
  - DONOR SELECTION AND EVALUATION
  - BONE MARROW COLLECTION PROCEDURE
  - PATIENT ASSESSMENT
  - PLANNING - TRANSPLANTATION PREPARATION
  - HOSPITALIZATION OF PATIENTS
  - GRAFT ADMINISTRATION
  - ADMINISTRATION OF BLOOD PRODUCTS
  - ADMINISTRATION OF LYMPHOCYTE DONOR
  - PATIENT MONITORING AFTER TRANSPLANTATION (FOLLOW UP)
  - CLINICAL RESEARCH
- CF (Cross Functional): Interoperable activities which include the procedures and relevant documents of the activities:
  - CODIFICATION AND MARKING OF GRAFTS
  - MOVEMENT OF GRAFT
  - MOVEMENT OF CELLULAR PRODUCTS
  - PROCESS VALIDATION
  - EMERGENCY RESPONSE
  - MANAGEMENT OF UNSUITABLE GRAFTS
  - DONOR AND PATIENT CONFIDENTIALITY
- RM (Resource Management): Resource Management Module which includes the procedures and relevant documents of the activities:
  - INTEGRATION OF A NEW EMPLOYEE
  - STAFF TRAINING
  - EQUIPMENT MANAGEMENT

- CLEANING OF SPACES
- SUPPLIES
- MONITORING OF ENVIRONMENTAL CONDITIONS

- QM (Quality Management) - Administrative processes which include the procedures and relevant documents of the activities:
  - PROCESS DESIGN AND DOCUMENT PUBLISHING
  - IMPLEMENTATION OF HOSPITAL REGULATIONS
  - MANAGEMENT OF SYSTEM FILES AND DATA
  - INTERNAL AUDIT
  - MANAGEMENT OF ISSUES
  - PATIENT RECEIPT AND EVALUATION
  - SYSTEM MANAGEMENT REVIEWS AND MEETINGS

All quality management system documents are reflected in a specific table for this purpose (see QMS CONTENTS).

10. Transplantation Procedures

10.1. Analysis of transplantation results

The policy of the program is to examine on a regular basis data and information on the effectiveness of transplantation by extension of the program.

10.1.1. Description of program performance data

The implantation data of the grafts, as well as other parameters of the patients (follow-up, complications, mortality, etc.) are recorded in appropriate documents of the QMS and in total in appropriate registries.

10.1.2. Continuous evaluation of effectiveness

On a quarterly basis, an evaluation of the program's data is carried out through the "Management Review" meeting (QM-RW-SOP-84 REVIEWS AND MEETINGS OF THE MANAGEMENT OF THE SYSTEM). The following data are evaluated during the meeting:

- CLINIC:
  - Transplant data (med-A initial & follow up)
    - Number of transplants
    - Graft infusion adverse events
    - engraftment time
    - Complications of patients (immediate and ulterior)
    - Graft versus Host disease

- infections
- Mortality
- Disease assessment at three months (100 days) – examined annually

- COLLECTION DEPARTMENT:
  - Graft parameters,
  - Donor evaluation data
  - engraftment time
- PROCESSING DEPARTMENT:
  - Graft parameters,
  - engraftment time

In case that there are found to be adverse fluctuations in the continuity of the results, the appropriate actions are determined based on the provisions of the QM-RW-SOP-84 REVIEWS AND MEETINGS OF THE SYSTEM MANAGEMENT

The accurate recording of the data concerning the transplantation is necessary for the proper analysis of the results of the program.

The BMT maintains databases for the recording of data and the evaluation of statistical data

It is the policy of the BMT to examine on a regular basis data and information on the performance of the Management System, as well as all the documents of the System, to take the necessary actions for its continuous improvement.

10.2. Data management

All handwritten and electronic data concerning donor / recipient data, donation codes, results of controls, processing and distribution are kept in a safe place for an indefinite period and as defined in the instructions of the JACIE – FACT standard.

Procedures have been developed to record the batch number, expiration date and manufacturer of the consumables and reagents used to process each graft. In addition, procedures are followed to ensure the connection between this information and the processing records. All personnel training and maintenance quality records shall be kept for a minimum of 30 years and shall be kept outside the laboratory.

According to national health regulations:

- All documents containing data of high importance for the safety and quality of tissues and cells shall be retained for 10 years after the use, expiry or disposal of tissues and/or cells.
- The basic data required for traceability by the donor shall be retained for 30 years after the use, expiry or disposal of the tissues and/or cells.

Procedures are in place to maintain confidentiality between the donor/patient and the recipient, so that the information is kept in a safe place and is only available to authorized personnel. All recordings and oral/written communication between collection, treatment and transplantation centers and their patients are considered confidential. The NHS is committed to the proper and legal management of the personal data it collects and uses for its operational activities.

The accurate recording of the data concerning the transplantation is necessary for the proper analysis of the results of the program.

The BMT maintains records for the recording of transplantation data and the production and evaluation of statistical data and the conduct of regular analyses.

Transplant data are annually reported to Hellenic transplant Organization (HTO), to EBMT (CIC 281, the Unit was audited for data collection from EBMT in 2008, Promise database), to the Center For International Blood and Marrow Transplant Research (CIBMTR 11075, according to a signed specific agreement valid since 2008) and to Hellenic Society of Hematology (HSH).

The BMT is connected to the central data management system of the EBMT, in which it records the patient data. The registration is carried out in the ProMISe (Project Manager Internet Server) system by the Data and File Manager of the BMT, at the behest of the Transplant Program Manager.

The data sent are:

- Tracking data provided by the MED-A data form of the EBMT.
- Monitoring data provided by the "follow-up" form of EBMT, per year.
- Monitoring data provided by the MED-B data form are sent to selected patients

10.3. Management of cellular products with positive microbial cultures

The policy of the program is to isolate and manage appropriately frozen products for which there are either no results of crops or virological control, or there is an indication of infectivity (positive results of crops or virological control) in order to avoid contamination of other products.

Also, in case there are positive results, all the necessary actions are taken in order to protect both the donor and the patient depending on the case.

The way in which the above is achieved is described in the CF-NC-SOP-73 PROCEDURE OF MANAGING UNSUITABLE GRAFTS.

10.4. Labeling and traceability of grafts

In order to uniquely identify the grafts in order to support their labeling and monitoring throughout their journey from the donor to the recipient, but also vice versa if necessary (traceability), the CF-LA-SOP-69 CODING AND LABELING OF GRAFTS procedure is applied.

The procedure describes how grafts are encoded and labeled at all stages of the movement of grafts from reception to transplantation or destruction, as well as the content of these labels.

In addition, it captures the way in which the document recording and transportation system ensures both the unique detection of information from the donor to the recipient, as well as the traceability from the recipient to the donor. Briefly, we use the Eurocode Technical Specification-2-1-0 and SEC Specification for all products. Each cellular therapy donation is assigned a unique alphanumeric identifier (CF-LA-INS-52 GUIDELINES FOR CODING) so it is possible to trace any product to its donor, the donor's medical record, and to all records describing the handling and final disposition of the product. There is an electronic system (GI-Blood) in place tracing each donation in the Collection Unit till its release from the Processing Department.

10.5. Control of products

The controls and procedures for the measurement, analysis and monitoring of the characteristics of the cellular products necessary to evaluate the safety and usefulness of the products shall be described in documents in accordance with Jacie instructions. The results of the checks shall be recorded in a processing file and checked by the person in charge of the laboratory before the distribution of the product. The total nucleated cells, CD34+ and CD3+ cells in the original products, residues and finished products are counted, as required, to ensure the required cell recovery in all processes.

Guidelines with acceptable cell percentages in the product have been recorded and the results are reviewed by the Laboratory Director and the QMS team. All control methods are contained in the procedures, they are managed using validated procedures and the results are clearly recorded.

10.6. Micro-biological control

Bacterial and virological testing is carried out for the treatment laboratory by other laboratories of the QMS. The tests of the samples are carried out with diagnostic kits that are CE certified and the results are recorded by the control laboratory and delivered to the processing laboratory.

10.7. Environmental monitoring

When cell processing involves their exposure to the environment, the processing environment is monitored.

10.8. Validation of reagents, equipment, and procedures

All reagents, equipment, and procedures are classified by the Head of each Unit for their significance related to hemopoietic reconstitution of the patients. Critical reagents, procedures and equipment are validated, documented, reviewed and signed off by the QMSM and Directors of each Unit in accordance to Change Control and Validation Procedures. There is an annual review of all processes and procedures. CF-VA-SOP-71 VALIDATION OF PROCESSES, QM-RW-SOP-84 MANAGEMENT REVIEW

11. Quality Management System: Management and operation

11.1. Generally

The Quality Management System of the BMT is a tool for administration, organization, and operation, based on quality, and as such it should be used.

In Annex I there is a useful user guide, which answers many frequently asked questions about the operation and use of the QMS.

11.2. System Management Organization

11.2.1. Quality Management System Manager

The Management has appointed the Quality Management System Manager, who has responsibilities and rights that include, among others:

- ensuring that the procedures of the Quality Management System are established, implemented and complied with,
- a report to the Management on the operation of the Quality Management System and its improvement needs,

In detail, the responsibilities of the Quality Management System Manager are recorded in the RM-OR-MNL-11 ORGANIZATION OF THE CLINICAL PROGRAM.

There are specialized external Quality System Managers who design the quality system, provide advice on compliance with standards and regulations, review and improve processes and ensure the implementation of process changes within the QM system. These are working closely with local Quality System Managers (QA's) who provide Quality Assurance, organize minuted meetings, categorise and prioritize review complaints and Incidents, review any potential SAEs or SARs with the Director of the relevant Facility, identify processes and items requiring validation, ensure the scheduled internal quality audits, ensures that factors which may affect safety and quality are identified, documented, investigated and that appropriate corrective and preventive action are taken.

11.2.2. Internal Communication

The official communication between both within the BMT, as well as between the BMT and the other Departments of the Hospital, follows:

- the hierarchy provided by the organization of the BMT as described in the RM-OR-MNL-11 ORGANIZATION OF THE CLINICAL PROGRAM and in the RM-OR-MNL-12 ORGANIZATION OF COLLECTION-PROCESSING DEPARTMENTS,
- the general organizational structure of the Hospital, in which the BMT is included,
- the procedures envisaged at BMT level

However, the communication on the issues related to the operation of the QMS and on what is provided for by it, is carried out through the Quality Management System Manager of the BMT, which is essentially the internal point at which all the weaknesses of the system must end up, as well as the questions and queries of the staff, to manage them properly.

In addition, the *Slack* platform is used as a tool for the dissemination of information between the individual departments that make up the Transplant Program. More specifically, in the workspace *MMMO PGNP* there are communication channels concerning the following procedures:

- Manage issues
- Transplant Scheduling – Weekly Staff Schedule
- Movement of graft/cellular products
- Information on GHPU regulations and administrative decisions
- Results of laboratory tests

The integration of stakeholders in the channels is controlled and regulated by the Manager of the workspace.

11.3. Monitoring of QMS

11.3.1. Internal Audits

Responsible for monitoring the proper implementation of the QMS is the Head of the Transplant Program as a representative of the Administration for quality issues, as well as the appointed Manager of the QMS.

The proper implementation of the MIS is monitored through internal inspections.

The BMT conducts an internal inspection regularly 1 time a year and exceptionally whenever necessary. The purpose of the inspections is to examine whether the Quality Management System:

- complies with the pre-planned arrangements and with the requirements of the FACT - JACIE standard and
- itis fit and maintained effectively.

Internal inspections shall be carried out either after a recorded deviation, or on the basis of a program which takes into account the location and gravity of the procedures and organizational units to be inspected, as well as the results of previous inspections.

The selection of inspectors and the conduct of inspections shall ensure the objectivity and impartiality of the inspection process.

During the internal audit, problematic points or areas in need of improvement shall be identified and appropriate actions shall be taken, the effectiveness of which shall be verified by the inspectors.

For the conduct of internal inspections, the principles of ISO 19011 and the QM-IA-SOP-81 INTERNAL AUDIT OF THE QMS shall apply.

The BMT has a system for carrying out independent internal audits to assess compliance with relevant regulatory requirements, guidelines, and the documented quality management procedures. Audits are either initiated by a senior member of the personnel after a documented deviation or scheduled in advance. They are conducted by trained internal auditors in accordance with defined procedures and cover all aspects of the BMT-BMT-PROGRAM activities. QM-IA-SOP-81 QMS INTERNAL AUDIT. The Directors of each Unit are responsible for planning audits in their area, ensuring that audits of their area are performed as scheduled and that corrective and preventive action is completed. The QSM is responsible for ensuring that follow up audits are carried out to verify that corrective actions have been completed and are effective in rectifying non compliances. (QM-008-RW-SOP-001 MANAGEMENT REVIEW). The clinical outcome of transplants is documented and analyzed in relation to clinical, collection and processing practice. Data are analyzed annually by the QSM team. Clinical outcome analysis represents the ultimate way to assess the whole system and is included in both internal and external audits. QM-RW-SOP-84 MANAGEMENT REVIEW.

11.3.2. Management review

The Management of HCTU reviews the Quality Management System at regular intervals, in order to ensure its continuous suitability, adequacy and effectiveness.

During the reviews, elements are examined which reflect the effectiveness of the system.

In addition, the following are being investigated:

- opportunities for improving the system
- possible necessity for change in the system
- measures to improve services
- needs in terms.

The Managers of the Quality Management System monitor the implementation of the decisions and any corrective, preventive or improvement actions that will result from the Administrative Review.

The above are specified in detail in the QM-RW-SOP-84 SYSTEM MANAGEMENT REVIEWS AND MEETINGS.

Processes are evaluated with analysis of deviation, validation results and monitoring with inspections, internal and external audits. On the basis of these information they are reviewed annually and improvements are suggested QM-RW-SOP-84 MANAGEMENT REVIEW, QM-SS-SOP-78 ISSUE OF QMS DOCUMENTS.

Meetings on coordination of BMT-PROGRAM Participants of the meetings are the Heads of the Units of the BMT-PROGRAM, the Head of the Hematology Division, others if needed and the QSM. The responsibility of the meetings belongs to the Clinical Program Director and are held at least twice a year. The purpose of the meetings is: to review and approve new strategies from the BMT-PROGRAM program, to assess third parties agreements, to review QM issues of the whole system

Meetings of QMS Participants of the meetings are the Head of the Units of the BMT-PROGRAM, the Head of the Hematology Division, and the QSM. The responsibility of the meetings belongs to the QSM. The purpose of the meetings is to review: the QMS, external and internal audits, issues arise from Departmental analysis of the QMS that require escalation, the QMS and external and internal audits are reviewed annually while issues requiring escalation are reviewed quarterly or unscheduled.

Meetings in each Department related to QMS Each Unit performs regular meetings with the responsibility of its Head related to the following issues.

- Review trends in documented events and raise any systematic failures identified as quality incidents for investigation and correction if necessary
- Follow-up and resolve any corrective and preventative actions which remain open beyond the target completion date
- Review the status of local departmental controlled documents and resolve documentation problems and documents remaining active beyond their review date
- Review the status of process changes and plans for local implementation
- Review environmental and product monitoring results and ensure appropriate corrective action
- Review of records and change control
- Identify and resolve problems and issues with the operation of the quality system within the Department.
- Follow-up and close any actions from previous meetings

The Head of each Unit decides which issues will be escalated to the meeting of QMS team. Each Unit schedules its meetings however these must be more than bi annually.

All meetings are minuted and the decisions implemented according to QM-RW-SOP-84 MANAGEMENT REVIEW.

11.4. Control of changes

There are policies and procedures for the uniform development, approval, implementation, review, archive, and retrieval of policies, standard operating procedures, protocols, forms, labels, educational and other documents. Policies and procedures for control of changes are described in QM-SS-SOP-78 ISSUE OF QMS DOCUMENTS

11.5. Deviation management

Within the framework of the transplant program, any deviation or complaint is treated and managed with a specific method, in order to record, evaluate, treat and take corrective actions. All deviations shall be checked by the coordinator of each unit and notified to the national authorities where necessary. [1]The method is described in detail in the QM-DV-SOP-55 ISSUE MANAGEMENT.

Management of deviations

For the purpose of QMS, deviations are defined all errors, accidents, adverse incidents and adverse events. Definitions of errors, accidents, adverse incidents and adverse events are given in QM-DV-SOP-55 MANAGEMENT OF DEVIATIONS AND COMPLAINTS. Adverse incidents and events are classified as serious according to a scale included in the QM-DV-FRM-275 DEVIATIONS MANAGEMENT PLAN. All deviations are reported, evaluated, investigated, reviewed and corrective actions taken if appropriate. Procedures require that all Adverse Events are investigated to determine the cause and corrective and preventive action is taken to eliminate the cause and improve outcomes. Adverse Events, investigations and corrective and preventive actions are recorded and archived. All events are reviewed by the Director of each Unit, QMS where necessary, and escalated to the National regulatory authorities as appropriate. All adverse reactions are documented within the processing records relating to the specific product. (QM-DV-SOP-55 MANAGEMENT OF DEVIATIONS AND COMPLAINTS, QM-RW-SOP-84 MANAGEMENT REVIEW). They are reviewed by the Processing Medical Director and audited if required.

11.6. QMS Improvement

The QMS is a dynamic management tool that supports the implementation of the Quality Strategy and the achievement of the objectives of the HCTU.

Its continuous improvement through corrective, preventive and improvement actions is a key objective of the organization. For this reason, all staff are motivated to participate in all kinds of actions that have as their ultimate goal the continuous improvement.

Whenever a systematic deviation is found, which concerns causes related to the system (incomplete procedures, training, etc.) by a member of the organization's staff, it is considered necessary to transfer this assessment to the QMSM, so that if it is deemed worthy of processing and management, the necessary actions can be taken to eliminate it.

All HCTU staff involved are encouraged to identify and indicate points that need improvement.

11.7. Handling of Documents.

The Quality Management System bases its operation on a set of recorded procedures, protocols, instructions, manuals and forms, on the proper observance of which depends on the full implementation of the system.

[1] For the purposes of this procedure, "Deviation" is any error, accident or unwanted reaction

The system is completed by this manual, which describes the system in general terms.

For this reason, it is considered important to properly manage such documents to ensure that the information and guidance provided is continuously timely and valid.

All documents that make up the QMS are audited documents. This means that appropriate actions are taken to:

- are approved in terms of adequacy before their adoption;
- reviewed and updated as necessary
- ensure that the identity of the changes and their current revision status are recognized
- ensure that they are identified and that they are available at their points of use;
- ensure that documents remain legible and easily identifiable
- ensure that their distribution is controlled, and
- provision is made for the unintended use of obsolete documents.

In addition, the circulation of copies of the system in printed form ensures the continuity of the operation of the system in case there is a lack of access to the electronic files.

The above is described in the QM-SS-SOP-78 PROCESS DESIGN AND QMS DOCUMENT AUTHORING

11.8. Archive management.

All necessary data and information, whether contained in electronic form or in paper form, shall be archived and kept in an appropriate manner so that they remain legible, easily identifiable and recoverable whenever needed.

In addition, for the electronic files of the management system, regular backups are received.

The management of all system files is described in detail in the QM-AR-SOP-80 MANAGEMENT OF SYSTEM FILES AND DATA.

The hard copies of patient files quality system documents are stored in specific secured and designated area (Archive Room) within the BMT UNIT which is at all times physically isolated, locked and accessible only to authorized registry personnel. Records are appropriately identified by a descriptive title clearly labeling the record. Each record is assigned a unique name, number or alphanumeric identification, and date to distinguish it from other records with the same identification.

We use the following Electronic tools and records. The e-tools run on the servers hosted in the University General Hospital of Patras' IT department and are protected by the applied security standards of the hospital. Electronic connection with the outside world is firewall protected via hardware encryption systems. Access to the databases is password protected and data entry is allowed to be performed by access level to authorized personnel only. The e-tools are backed up automatically and maintained according to third party agreements by the developing companies and by specialized personnel of the IT department of the Hospital. IT support: Theoni Pitoura, Computer Ing., Phd, MSc, Dept of Informatics at University Hospital Patras, +30 2613 603 757, tpit@pgnp.gr Specific qualifications: IT specialist, English: professional working proficiency. Time dedication: on demand

- BMT server. Includes all quality records such as patient records, staff training and equipment maintenance. In addition, it is a requirement of Health Authorities that: The Centre's server hosted in the University General Hospital of Patras' IT department and is protected by the applied security standards of the hospital. Hardware redundancy has already been established on the file server through Redundant Array of Inexpensive Disks configuration (RAID) in case of disc failures. In addition, the administrative Manager keeps a record of all hardware assets including the personal PCs of the staff once a month.
- "MODUS" The BMT Unit utilizes a document management system called "MODUS software" for Digital Archiving and Version Management of all file formats and controlled documents (Papyros, El. Venizelou (Grammou) 82&Artemidos 18345 Moschato Athens, Greece Tel: +30 210 9414900). The company provides operative consultancy, training and system maintenance according to a signed contract.
- "Medilabi" laboratory information management system (LIMS). Electronic system for tracking patient data (data, lab results, radiology results, etc)
- G-Blood. LIMS for cell products. Electronic system tracing each donation in the Collection Unit till its release from the Processing Unit.

12. Safety and hygiene

The GHPU implements the national legislation on safety and hygiene in accordance with the administration's planning. According to the planning of the GHPU, the director of the hematology department has the right to develop an emergency plan concerning the department (CF-HS-MNL-9 SAFETY AND HYGIENE MANUAL). This project was developed taking into account as priorities:

- The safety of the patients
- The preservation of grafts
- The safety of the vessels

13. Control of interruption/Termination of Activities and Emergency Plans

An emergency plan for patients, donors and cellular product storage in case of earthquake, fire or other major disaster is in place according to a signed agreement with the BMT Unit in Attiko Hospital, Athens and also based on circulars from the Ministry of health and decisions of the senior Hospital administration team (CF-ER-SOP-72 EMERGENCY RESPONSE). Emergency short term back up for storage of cryopreserved donations is available also at other sites located in the University of Patras (CF-ER-SOP-72 EMERGENCY RESPONSE). Alternative manual product processing in case of emergency is available and described in PR-CR-PRT-005.

ANNEX I - FREQUENTLY ASKED QUESTIONS (FAQ)

QUESTION	ANSWER
Who will I contact for questions about the Quality Management System?	The external Quality System Managers as well as the local Quality System Managers (QA's)
Where will I find the documents/forms I need to use to implement the system?	In the special form folder available to my department for this purpose or in the central electronic file and more specifically in the QMS CONTENTS
What should I do if I find a mistake, deficiencies, or weaknesses in the system?	Applying the procedure QM-DV-SOP-55 MANAGEMENT OF SUBJECTS to fill in the prescribed form and send it to the QMSM
What can I do to suggest improvements to our system and operating methods in general?	To convey the proposal (in writing) to the QMSM with the agreement of my immediate supervisor.
How is it checked if the system is applied and is working?	Through the conduct of internal inspections. Inspections shall be carried out at least 1 time a year under the coordination of the MSMD, by appropriately trained inspectors.
Who controls the Quality Management System Manager and who controls the Management and certifies the correct implementation of the system?	Jacie Agency which issues the final certificate of conformity of the system.
How can I easily study the System?	As far as the documents concerning me are concerned, I consult the job description and refer to the relevant procedures mentioned.
Can I transfer parts or the entire system out of the company?	The QMS is a secret asset of the HCTU, and this can be transferred outside the company or to third parties ONLY after the necessary approvals.

14. Appendix II Legislation and guidelines governed the Transplantation Program \ Αδειοδοτήσεις / ΦΕΚ

- 1995_ΦΕΚ_1ης ΑΔΕΙΑΣ_ΜΜΜΟ
- 2002_Εσωτερικός Κανονισμός Κλινικής Παθολογίας
- 2013_Οργανισμός ΠΓΝΠ_ΦΕΚ_697β_2013
- 2016_ΦΕΚ_Αδειας_2016_1377Β Διευθ.Α.Σπυριδωνίδης
- 2019_ΦΕΚ_4610_07052019_Αρθρο 37_Δημιουργία ΠΕΚ_Ινστιτούτο
- 2020_Εσωτερικος κανονισμος ΙΚΤ_ΦΕΚ 3013-21.7.2020 τ. Β΄
- 2020_ΦΕΚ ΜΜΜΟ 2988Β_2020-2023
- 2020_ΦΕΚ 174__Ινστιτούτο_Διευθυντής
- 2021_ΦΕΚ 2572 Ίδρυση Διϊδρυματικού ΠΜΣ με τίτλο Cell and Gene Therapies fro..
- Επιστολή προς ΕΟΠΥΥ_ Αποζημίωση υπηρεσιών υγείας_Μεταμόσχευση ΑΑΚ
- 1997_ΔΣ Εναρξη λειτουργίας ΜΜΜΟ
- 2005_ΔΣ_Χιμαιρισμος
- 2011_ΔΣ_GVHD πρωτοκολλο
- 2019-10_Απόφαση ΔΣ για συντονιστή
- 2020_ΑΠ 24311 2020-09 Απόφαση μετακίνησης Φραγκοπανάγου σ...
- 2020_ΔΣ για λειτουργία ΜΜΜΟ
- 2020_ΔΣ_Epicell
- 2020 ΕΣ Yescarta
- 2005_ΒΙ_ΕΣ_ΠΓΝΠ_Χιμαιρισμός
- 2006_ΒΙ_ΕΣ_ΠΓΝΠ_ΠΜ_525_12-9-2006
- 2006_ΒΙ_ΕΣ_ΠΓΝΠ_Στρατηγικη ΜΕταμο...
- 2009_ΒΙ_ΕΣ_ΠΓΝΠ_AML_134_3-4-2009
- 2011_ΒΙ_ΕΣ_ΠΓΝΠ_GVHD_391_14-6-2011
- 2013_ΒΙ_ΠΠ_ΚΕΔΜΟΠ
- 2013_ΒΙ_ΠΠ_Κυτταρικές θεραπείες
- 2020_ΒΙ_ΠΓΝΠ_Epicell
- 2020_ΒΙ_ΠΓΝΠ_Lck_Nb
- 2021_ΒΙ_ΠΠ_Transcell
- 2019_01α_ΦΕΚ_4600_ Αρθρο 141_42 ΕΟΜ
- 2019_Οροι και Προυποθεσεις_ΜΜΜΟ_ΦΕΚ Μονάδες Εφαρμογής_384_13-2-19
- 2019_ΣΕΥΥΠ_Εκθεση Ελέγχου_ΚΕΔΜΟΠ
- 2020_ΦΕΚ ΤΙΜΟΛΟΓΗΣΗΣ_3_08_2020
- 2021_άρθρο 18_ΑΕΙ_ΚΕΝΤΡΑ_ΔΟΤΩΝ
- 2021_Τροποποίηση του φεκ τιμολόγησης της 3_08_2020
- 2022_ΕΟΜ_ΚΕΔΜΟΠ_Τιμολογιο
- 2022_ΕΠΙΣΤΟΛΗ ΠΡΟΕΔΡΟΥ ΕΟΜ -ΛΕΙΤΟΥΡΓΙΑ ΚΕΝΤΡΟΥ ΔΟΤΩΝ ΚΕΔΜΟΠ - ΧΑΡΙΣΕ ΖΩΗ (6500-9-...

Εφαρμοστέοι Νόμοι κανονισμοί, διατάξεις, πρότυπα και οποιαδήποτε άλλη απαίτηση από ρυθμιστικές αρχές

- ΟΡΟΙ ΚΑΙ ΠΡΟΫΠΟΘΕΣΕΙΣ ΛΕΙΤΟΥΡΓΙΑΣ ΜΟΝΑΔΩΝ ΕΦΑΡΜΟΓΗΣ ΑΥΤΟΛΟΓΩΝ ΚΑΙ ΑΛΛΟΓΕΝΩΝ ΑΡΧΕΓΟΝΩΝ ΑΙΜΟΠΟΙΗΤΚΩΝ ΚΥΤΤΑΡΩΝ (Υ.Α. Γ2γ/οικ.8451/01-02-2019)
- Τμήμα Επιθεώρησης του ΕΟΦ / Διεύθυνση Ελέγχου Παραγωγής αδειών δυνατότητας παραγωγής φαρμακευτικών προϊόντων / πιστοποιητικών συμμόρφωσης με τους κανόνες GMP
- Καθορισμός τιμοκαταλόγου υπηρεσιών που παρέχει ο Εθνικός Οργανισμός Μεταμοσχεύσεων (Ε.Ο.Μ.) ή οι εποπτευόμενες από αυτόν Μονάδες κατά τη διαδικασία αναζήτησης, λήψης και μεταφοράς μοσχεύματος αρχέγονων αιμοποιητικών κυττάρων, από τις Διεθνείς Δεξαμενές Αναζήτησης Υ.Α. Γ2γ/Γ.Π./33512/2020, 2020, ΦΕΚ 3218, Β
- Υ.Α. Γ2γ/Γ.Π./33512/2020, 2020, ΦΕΚ 3218, Β - Αρθρο ζ. Οι διοικήσεις των νοσηλευτικών ιδρυμάτων του αρθρ. 51 του ν. 3984/2011 που λειτουργούν ως οργανισμοί προμήθειας, στις οποίες διενεργούνται οι συλλογές μοσχευμάτων αρχέγονων αιμοποιητικών κυττάρων που προορίζονται για αλλογενή μεταμόσχευση. Για το σκοπό αυτό οφείλουν να δαπανούν σε ετήσια βάση ποσοστό τουλάχιστον 75% επί των συνολικών εσόδων που προέρχονται από την αποζημίωση των οργανισμών προμήθειας, για τις υπηρεσίες που παρείχαν στη διεκπεραίωση διεθνών αιτημάτων αξιοποίησης του Ε.Μ.α.α.κ, με βάση τις τιμές του παραρτήματος ΙΙ. Σε ετήσια βάση αξιολογείται από το διοικητικό συμβούλιο του Ε.Ο.Μ. ο βαθμός ενίσχυσης των μονάδων που διενεργούν τις εν λόγω συλλογές μοσχευμάτων, στη βάση στοιχείων που ο Οργανισμός ζητά και λαμβάνει από τις διοικήσεις των αντίστοιχων νοσηλευτικών ιδρυμάτων και εισηγείται στο Υπουργείο Υγείας μέτρα βελτιστοποίησης της διαχείρισης των ποσών που αντιστοιχούν στην αποζημίωση των υπηρεσιών συλλογής μοσχευμάτων α.α.κ.»
- Καθορισμός όρων και προϋποθέσεων λειτουργίας των Μονάδων Μεταμοσχεύσεων συμπαγών οργάνων και διαδικασία χορήγησης και ανάκλησης άδειας λειτουργίας αυτών, Υ.Α. Υ4α/36538, 2012, 1262, Β
- Δωρεά και μεταμόσχευση οργάνων και άλλες διατάξεις, Ν. 3984, 2011, 150, Α
- Ρύθμιση θεμάτων Ε.Ο.Μ. (Τροποποίηση Νόμου 3984/2011 άρθρο 2, άρθρο 13 παρ. 5, άρθρο 15 παρ. 4, άρθρο 51 παρ. 5, άρθρο 66 παρ. 8-9, κεφάλαιο Η), Ν. 4368 Άρθρο 56 παρ. 1-3, 5, 7, 2016, 21, Α
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- Εθνικός Οργανισμός Μεταμοσχεύσεων, Εθνικό Μητρώο Εθελοντών Δοτών Αρχέγονων Αιμοποιητικών Κυττάρων και μονάδων Ομφαλοπλακουντιακού Αίματος, Κέντρα δοτών, Τιμολόγηση υπηρεσιών του Ε.Ο.Μ. (Τροποποίηση Νόμου 3984/2011 άρθρο 12 παρ. 1, άρθρο 15 παρ. 2, άρθρο 44 παρ. 4, άρθρο 48 παρ. 5-6, άρθρο 51 παρ. 4, άρθρο 54 παρ. 2, άρθρο 55 παρ. 2, άρθρο 57 παρ. 3-4, άρθρο 58 παρ. 1-3 & 6-7), Ν. 4600 Άρθρο 140, 141, 142, 172, 2019, 43, Α
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- Προσόντα και καθήκοντα Συντονιστών Μεταμοσχεύσεων, Π.Δ. 93, 2002, 79, Α
- Θέσπιση προτύπων, ποιότητας και ασφάλειας για τη δωρεά, την προμήθεια, τον έλεγχο, την επεξεργασία, τη συντήρηση, την αποθήκευση και τη διανομή ανθρωπίνων ιστών και κυττάρων και τις συναφείς προς αυτήν οδηγίες 2006/17/εκ και 2006/86/εκ (Εναρμόνιση της ελληνικής νομοθεσίας προς την Οδηγία 2004/23/εκ του Ευρωπαϊκού Κοινοβουλίου και του Συμβουλίου της 31ης Μαρτίου 2004), Ν. 4272 Άρθρο 43 παρ. 2-7, 2014, 145, Α
- Τεχνικές απαιτήσεις για την κωδικοποίηση ανθρώπινων ιστών και κυττάρων - Διαδικασίες για την επαλήθευση της ισοδυναμίας των προτύπων ποιότητας και ασφάλειας των εισαγόμενων ιστών και κυττάρων (ενσωμάτωση στην ελληνική νομοθεσία των Οδηγιών ΕΕ 2015/565 της Επιτροπής της 8ης Απριλίου 2015 για την τροποποίηση της Οδηγίας 2006/86/ ΕΚ και ΕΕ 2015/566 της Επιτροπής της 8ης Απριλίου 2015 σχετικά με την εφαρμογή της Οδηγίας 2004/23/ΕΚ), Π.Δ. 129, 2016, 29, Α
- Όροι και προϋποθέσεις λειτουργίας Τραπεζών Ομφαλοπλακουντιακού Αίματος (Οπ.Α), Υ.Α. Α3γ/οικ. 18092, 2017, 1005, Οδηγία 2002/98/ΕΚ για τον καθορισμό των προτύπων ποιότητας και ασφάλειας για τη συλλογή, τον έλεγχο, την επεξεργασία, την αποθήκευση και τη διανομή ανθρώπινου αίματος και συστατικών του αίματος ως τροποποίηση της Οδηγίας 2001/83/ΕΚ.Οδηγία 2004/33/ΕΚ για την εφαρμογή της Οδηγίας 2002/98/ΕΚ σχετικά με συγκεκριμένες τεχνικές απαιτήσεις για το αίμα και τα συστατικά του αίματος (Κείμενο που σχετίζεται με τον ΕΟΧ).

- Οδηγία 2005/61/ΕΚ για την εφαρμογή της Οδηγίας 2002/98/ΕΚ σχετικά με τις απαιτήσεις για δυνατότητα εντοπισμού και την ειδοποίηση για σοβαρές ανεπιθύμητες αντιδράσεις και συμβάντα (Κείμενο που σχετίζεται με τον ΕΟΧ).
- Οδηγία 2005/62/ΕΚ για την εφαρμογή της Οδηγίας 2002/98/ΕΚ σχετικά με τα πρότυπα της Κοινότητας και τις προδιαγραφές που σχετίζονται με το σύστημα ποιότητας για τις εγκαταστάσεις επεξεργασίας αίματος (Κείμενο που σχετίζεται με τον ΕΟΧ).
- Οδηγία 2004/23/ΕΚ για τον καθορισμό προτύπων ποιότητας και ασφάλειας για τη δωρεά, την απόκτηση, τον έλεγχο, την επεξεργασία, τη διατήρηση, την αποθήκευση και τη διανομή ανθρώπινων ιστών και κυττάρων.
- Οδηγία 2006/17/ΕΚ για την εφαρμογή της Οδηγίας 2004/23/ΕΚ σχετικά με ορισμένες τεχνικές απαιτήσεις για τη δωρεά, την απόκτηση και τον έλεγχο των ανθρώπινων ιστών και κυττάρων.
- Οδηγία 2006/86/ΕΚ για την εφαρμογή της Οδηγίας 2004/23/ΕΚ σχετικά με τις απαιτήσεις δυνατότητας εντοπισμού, την ενημέρωση για σοβαρές ανεπιθύμητες αντιδράσεις και συμβάντα και συγκεκριμένες τεχνικές απαιτήσεις για την κωδικοποίηση, την επεξεργασία, τη συντήρηση, την αποθήκευση και τη διανομή ανθρώπινων ιστών και κυττάρων.
- Οδηγία 2015/565 για τροποποίηση της Οδηγίας 2006/86/ΕΚ σχετικά με ορισμένες τεχνικές απαιτήσεις για την κωδικοποίηση των ανθρώπινων ιστών και κυττάρων.
- Κανονισμός της ΕΕ 2016/679 της 27ης Απριλίου 2016 για την προστασία των φυσικών προσώπων σχετικά με την επεξεργασία δεδομένων προσωπικού χαρακτήρα και την ελεύθερη κυκλοφορία των δεδομένων αυτών
- Τεχνικές απαιτήσεις για την κωδικοποίηση ανθρώπινων ιστών και κυττάρων - Διαδικασίες για την επαλήθευση της ισοδυναμίας των προτύπων ποιότητας και ασφάλειας των εισαγόμενων ιστών και κυττάρων (ενσωμάτωση στην ελληνική νομοθεσία των Οδηγιών ΕΕ 2015/565 της Επιτροπής της 8ης Απριλίου 2015 για την τροποποίηση της Οδηγίας 2006/86/ ΕΚ και ΕΕ 2015/566 της Επιτροπής της 8ης Απριλίου 2015 σχετικά με την εφαρμογή της Οδηγίας 2004/23/ΕΚ)
- Προσόντα και καθήκοντα Συντονιστών Μεταμοσχεύσεων, Π.Δ. 93, 2002, 79, Α

Regulatory authorities

- Hellenic Transplantation Organization BMT activity and outcome
- National Blood Centre Reporting annually of collection activities
- Coordinating Centre of Hemovigilance Reporting Bi-annually adverse events of donors
- Reporting immediately transmission of blood born infection to recipient

Voluntary reporting

- EBMT BMT activity and outcome
- CIBMTR BMT activity and outcome
- Hellenic Society of Hematology BMT activity and outcome

Standards

- FACT-JACIE Standards 7th edition , Guidance to Accompany the FACT-JACIE
- International Standards for Cellular Therapy Product Collection, Processing, and Administration
- WMDA COURIER GUIDELINES World Marrow Donor Association (WMDA) Guidelines for couriers and the transportation of haemopoietic progenitor cells (HPC-BM, apheresis and therapeutic cells- T Cells)

15. Appendix III

Figure 2

OPERATIONAL ORGANIZATION OF THE BMT PROGRAM

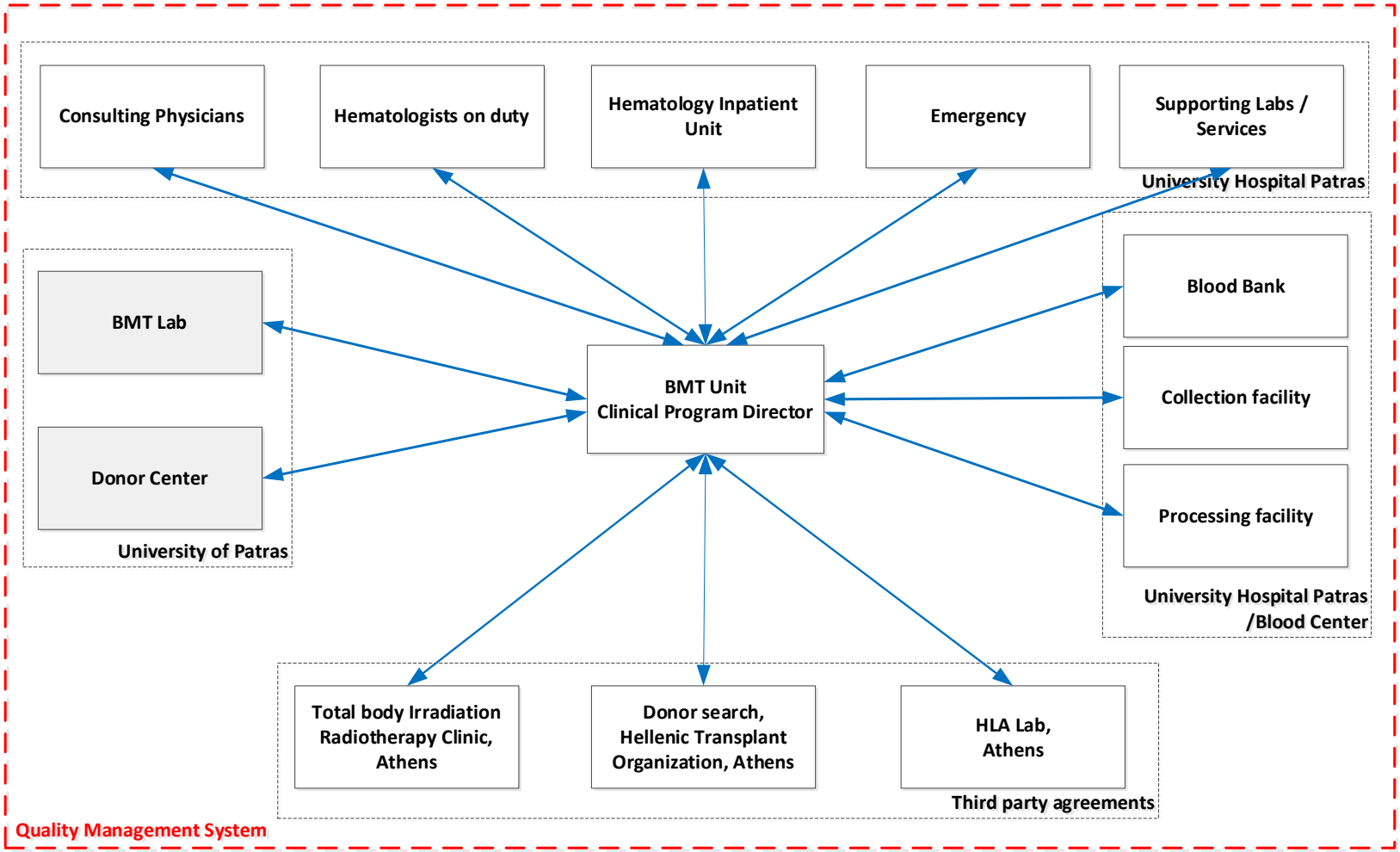

Figure 1 - Operational organization of the BMT Program

Quality Management System Manual

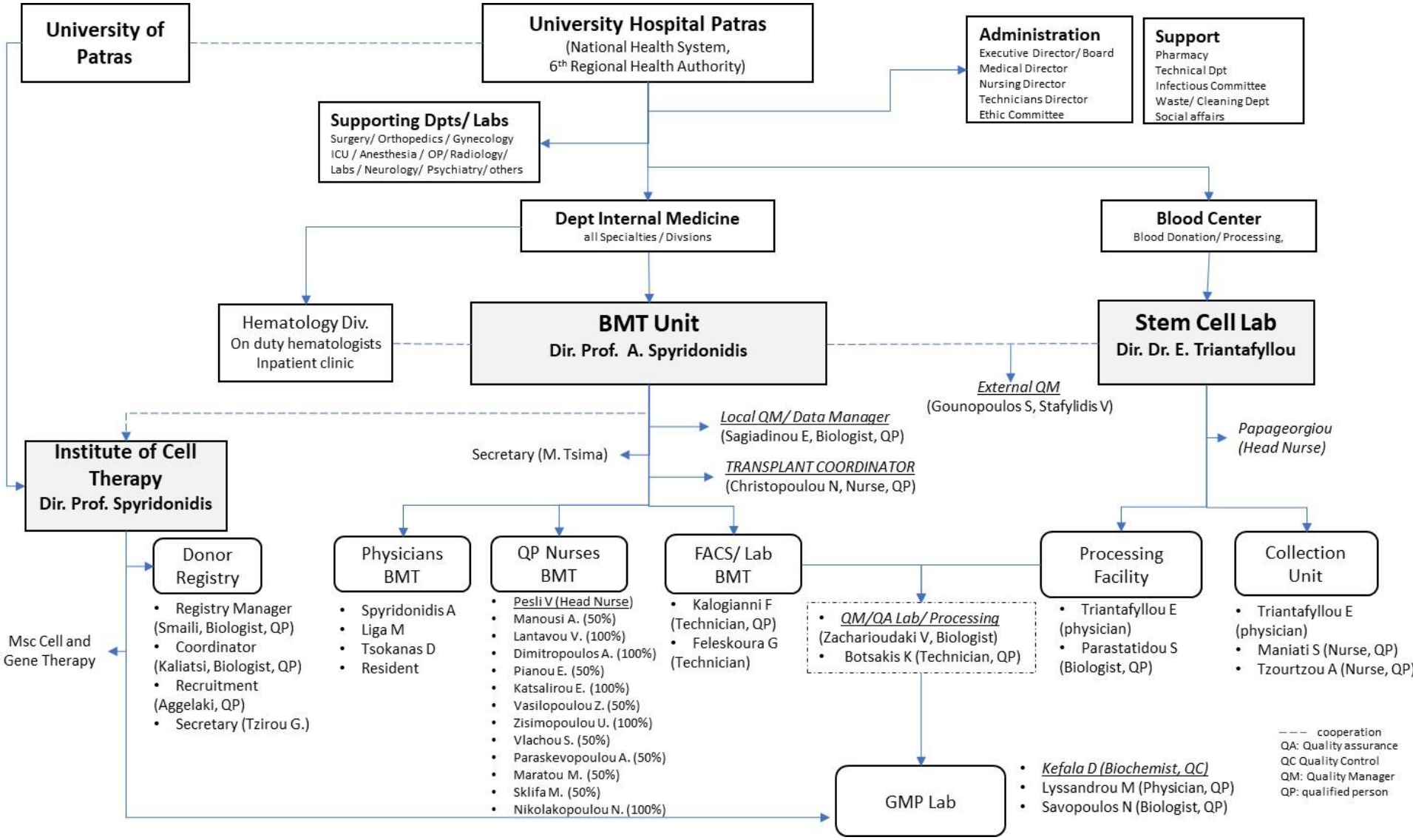

Figure 2 - Organization chart of the BMT Program

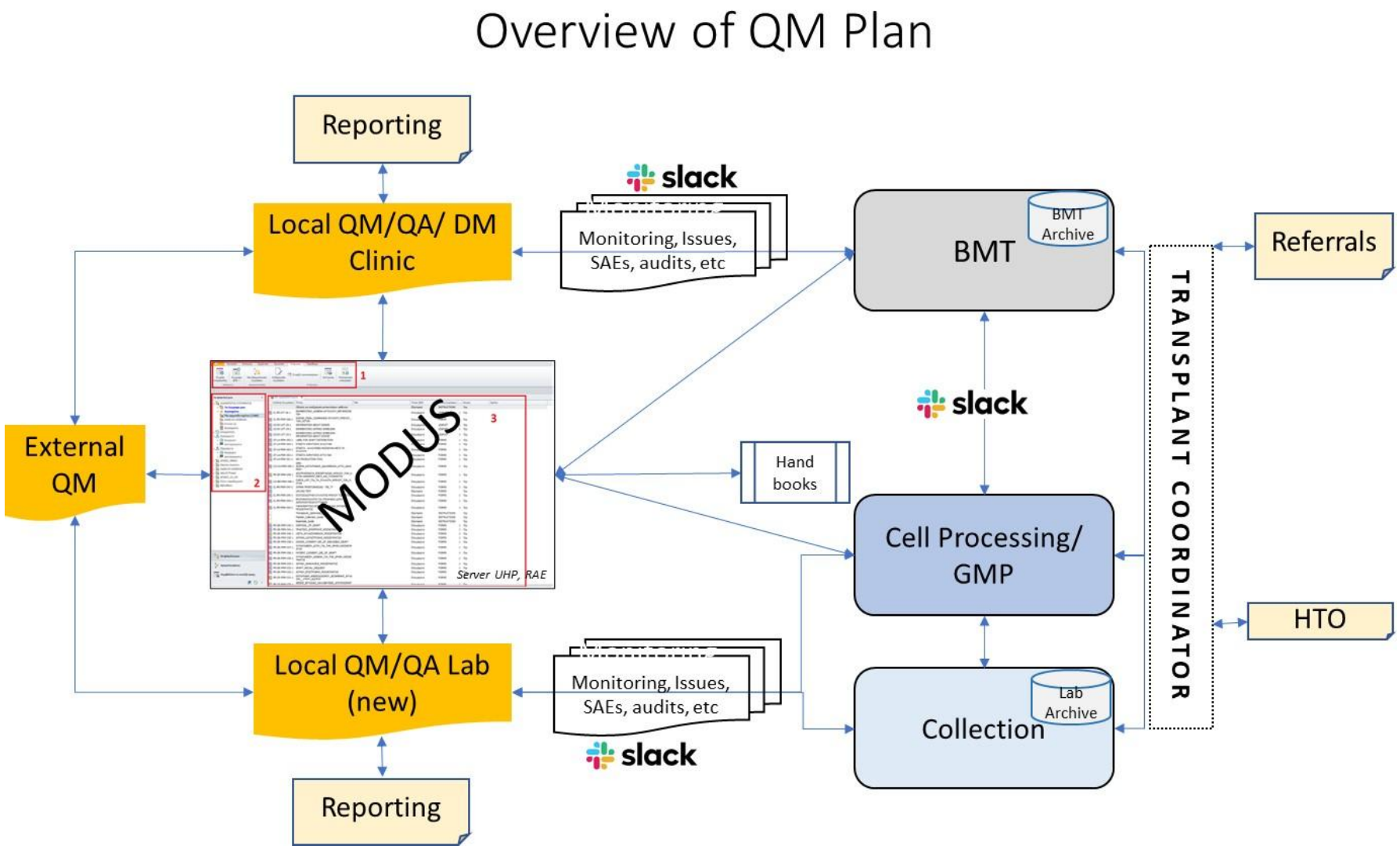

Figure 3 - Overview of the QM Plan