

Guide for Working Group/AFC-Diploma
Committee, Educators, and Candidates

MARCH 2017
VERSION 2.0

Note: Throughout this document, and per the criteria for an AFC discipline, all statements refer to the diplomate's application of Solid Organ Transplantation competencies to the pre-defined patient population and pre-existing competencies as outlined by his/her entry discipline.

"Physician AFC trainee" refers to candidates whose entry discipline is one of the following: Gastroenterology, Hepatology, Infectious Diseases, Nephrology, or Respiriology.

"Surgical AFC trainee" refers to candidates whose entry discipline is one of the following: Cardiac Surgery, General Surgery, Urology, or Thoracic Surgery.

DEFINITION

Solid Organ Transplantation is that area of enhanced competence concerned with the care of adult and pediatric patients with end-stage organ failure treated by transplantation, encompassing patients with heart, lung, liver, kidney, pancreas, and intestinal organ transplants.

GOALS

Upon completion of training, a diplomate is expected to function as a competent specialist in Solid Organ Transplantation, capable of an enhanced practice in this area of focused competence (AFC) within the scope of Cardiac Surgery, Gastroenterology, General Surgery, Hepatology, Infectious Diseases, Nephrology, Respiriology, Thoracic Surgery, or Urology. The AFC trainee must acquire a working knowledge of the theoretical basis of the discipline, including its foundations in science and research, as it applies to medical/surgical practice.

The discipline of Solid Organ Transplantation includes responsibility for

- evaluation of individuals with end-stage organ disease to determine their suitability for organ transplantation;
- evaluation of potential organ donors to determine suitability for organ donation;
- advocacy for organ donation and the equitable allocation of donated organs to individuals awaiting organ transplantation;
- procurement and preservation of organs from living and deceased donors, implantation of these organs into individuals with end-stage organ disease, and management of the optimization of organ quality through the application of ex vivo preservation techniques and operative timing;
- provision of perioperative care to the organ transplant recipient;

COMPETENCY PORTFOLIO FOR THE DIPLOMA IN SOLID ORGAN TRANSPLANTATION (2017)

- management of immunosuppression in an organ transplant recipient;
- monitoring of allograft function in organ transplant recipients and management of allograft dysfunction;
- provision of care to organ transplant recipients with end-stage graft dysfunction; and
- advancement of the discipline through participation in scholarly activities.

Note: All submissions must be signed off by supervisor prior to adding to portfolio.

Note: Case summaries should be no more than one page if written solely for the purposes of this portfolio. It is permitted that submissions of patient documents may be longer.

Note: All submitted cases or clinical material must be de-identified to preserve patient privacy. This requires the removal of key identifiers, including but not limited to name, birth date, date of consultation, and location (e.g., hospital/clinic, city). In some cases, even without these identifiers, a patient could be identified by other information included in the case or clinical material (e.g., if the patient has a very rare condition, or lives in a remote area with a limited population size). In these instances de-identification may not be sufficient to ensure patient privacy. In such exceptional cases it would be advisable to obtain patient consent for the submission.

Diplomates must demonstrate the requisite knowledge, skills, and behaviours for effective patient-centred care and service to a diverse population. In all aspects of specialist practice, the diplomate must be able to address ethical issues and issues of gender, sexual orientation, age, culture, beliefs, and ethnicity in a professional manner.

This portfolio pertains to a candidate with entry certification/attestation in (*check one*):

At section 4, the AFC trainee must complete milestone 4.3. **and** the relevant milestone(s) indicated below:

- | | | |
|---------------------|--------------------------|--|
| Gastroenterology | <input type="checkbox"/> | 4.2. |
| Hepatology | <input type="checkbox"/> | 4.2. |
| Infectious Diseases | <input type="checkbox"/> | 4.2. |
| Nephrology | <input type="checkbox"/> | 4.2. |
| Respirology | <input type="checkbox"/> | 4.2. |
| Cardiac Surgery | <input type="checkbox"/> | 4.1.1. |
| General Surgery | <input type="checkbox"/> | 4.1.3.; with optional 4.1.4. and/or 4.1.5. |
| Thoracic Surgery | <input type="checkbox"/> | 4.1.2. |
| Urology | <input type="checkbox"/> | 4.1.4. |

At the completion of training, the AFC trainee must demonstrate evidence of acquisition of the competencies listed on the following pages.

In the view of the AFC Program Committee, this candidate has acquired the competencies of the diploma program as prescribed in the *Competency Portfolio* and is competent to practise as a diplomate. **YES** **NO**

COMMENTS

1. Evaluation of individuals with end-stage organ disease to determine their suitability for organ transplantation		
Milestones	Standards of Assessment	Documents to be Submitted
<p>1.1. Assess individuals with end-stage organ disease for suitability for organ transplantation</p>	<p>One (1) submission must include the decision that the candidate is suitable for organ transplantation; and two (2) submissions must include the decision, for two different reasons, that the candidate is unsuitable for transplant or delay is recommended.</p> <p>Summaries must include the patient history, including indication for organ transplantation and co-morbidities. A description of each of the following must be included in the pertinent factors and rationale for the suitability decision:</p> <ul style="list-style-type: none"> • stage of the disease • psychosocial issues • medical comorbidities • surgical issues <p>The assessments may have been made in person or through document review.</p>	<p>Three (3) summaries or consultation notes of decisions regarding organ transplant suitability</p>

<p>1.2. Participate in or lead patient discussions in interprofessional team meetings regarding suitability of individuals for organ transplantation</p>	<p>The collated feedback must demonstrate satisfactory ability to clearly present a case, interact collaboratively and professionally with other team members, and effectively advocate for the needs of the individual patient.</p> <p>Contributors may include the transplant coordinator, social worker, dietician, physicians, surgeons, or other team members.</p>	<p>Collated results of multisource feedback</p>
<p>1.3. Discuss uncertainty (e.g., of organ availability, timing of transplantation, organ quality, and risk of transmissible disease) and address challenging communication issues such as removal from waiting list or lack of suitability for organ transplantation</p>	<p>Satisfactory completion of two (2) directly observed mini-clinical evaluation exercises (mini-CEX) of discussions with individuals with end-stage organ disease being evaluated for their suitability for organ transplantation, including the following:</p> <ul style="list-style-type: none"> • one (1) case accepted for organ transplantation • one (1) case not suitable for organ transplantation, or not suitable at this time <p>Observations must document the ability to deliver information that is understandable and encourages discussion and clarification of concerns.</p>	<p>Two (2) satisfactory mini-CEX observations (using Royal College Solid Organ Transplantation (SOT) template) of patient discussions</p>

2. Evaluation of potential organ donors to determine suitability for organ donation		
Milestones	Standards of Assessment	Documents to be Submitted
<p>2.1. Evaluate potential organ donors (deceased and living, as appropriate) with regard to suitability for organ transplantation</p>	<p>Submissions must include one (1) in which the donor/organ was suitable for transplantation and two (2) in which they were not. Cases must include at least two (2) of the following scenarios:</p> <ul style="list-style-type: none"> • risk of transmissible disease • donor organ dysfunction or risk thereof • complex anatomic factors • type of donor <p>Each submission must provide</p> <ul style="list-style-type: none"> • a summary of pertinent donor factors • the rationale for the suitability decision • factors in recipient selection, organ preservation, or surgical timing that may mitigate the risk (if appropriate) 	<p>Three (3) case summaries of potential donor organ evaluations</p>

3. Advocacy for organ donation and the equitable allocation of donated organs to individuals awaiting organ transplantation		
Milestones	Standards of Assessment	Documents to be Submitted
3.1. Participate in the allocation of donated organs to individual patients	<p>Case summaries must include a discussion of the pertinent factors in arriving at the allocation decision. These factors may include:</p> <ul style="list-style-type: none"> • immunologic factors and appropriate interpretation of tests performed by the tissue typing lab • assessment of donor organ function • anatomical considerations • risk of transmissible disease • recipient status, risk of progression, and medical urgency • time on the waiting list • multi-organ transplant considerations 	Three (3) case summaries of organ allocation decisions

<p>3.2. Allocate organs for transplantation</p>	<p>EITHER</p> <p>(a) Submission must provide a critique of an organ allocation algorithm, or portion thereof. The critique must include a discussion of the application of the ethical principles of allocation of a finite resource (e.g., utility, equity), advocacy for vulnerable groups (e.g., pediatric, the gravely ill, the highly sensitized, multi-organ transplant), and the role of the algorithm in achieving acceptable medical outcomes.</p>	<p>EITHER</p> <p>(i) A reflective critique of an actual or simulated organ allocation algorithm</p> <p>Acceptable formats include a slide presentation or a brief written report (maximum one (1) page)</p>
	<p>OR</p> <p>(b) Submit evidence of significant participation in the creation of an organ allocation algorithm.</p>	<p>OR</p> <p>(ii) An organ allocation algorithm and explanation of the candidate's role in its creation</p>

<p>3.3. Advocate for organ donation and transplantation</p>	<p>Satisfactory completion of a written reflection of advocacy at the program, hospital, community, or population level. The submission must include identification of key stakeholders in organ donation and transplantation, appreciation of vulnerable populations, description of role of transplant physician/surgeon in the encounter, and awareness of policies that impact organ donation.</p>	<p>One (1) written reflection of advocacy (maximum one (1) page)</p>
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Sample

NOTE: In section 4, the AFC trainee must complete milestone 4.3. and at least one milestone from 4.1. and 4.2., as detailed on page 2 of this portfolio.

4. Procurement of organs from living and deceased donors, implantation of these organs into individuals with end-stage organ disease, and management of the optimization of organ quality through the application of preservation techniques and operative timing		
Milestones	Standards of Assessment	Documents to be Submitted
<p>4.1. Perform organ transplantation procedures</p> <p>4.1.1. Heart transplant surgeons:</p> <ul style="list-style-type: none"> - heart procurement - orthotopic heart transplantation <p>4.1.2. Lung transplant surgeons:</p> <ul style="list-style-type: none"> - lung procurement - lung transplantation <p>4.1.3. Liver transplant surgeons:</p> <ul style="list-style-type: none"> - below diaphragm multi-organ procurement from a deceased donor (both neurological determination of death (NDD) and donation after cardiac death (DCD) donors) - back table organ preparation, including splitting of liver - multivisceral abdominal organ transplantation - portal vein/superior mesenteric vein conduit - aortoiliac conduit 	<p>(a) The logbook must document the type of procedure, the trainee's role in the procedure, and whether primary, repeat, and/or multi-organ transplantation.</p> <p>Supervisor must attest to the trainee's role in the procedure and proficiency attained.</p>	<p>(i) SOT logbook</p>
	<p>AND</p> <p>(b) The submitted operating room (OR) notes must include the ischemic time and indication for the procedure.</p>	<p>AND</p> <p>(ii) Three (3) OR notes for each required procedure</p> <p>A note may document multiple procedures in a single OR</p>

<p>4.1.4. Kidney transplant surgeons:</p> <ul style="list-style-type: none">- kidney transplantation- open and minimally invasive living donor nephrectomy- procurement of kidneys from deceased donor (both NDD and DCD donors)- transplant nephrectomy- reconstruction and reimplantation of the transplant ureter <p>4.1.5. Pancreas transplant surgeons:</p> <ul style="list-style-type: none">- donor pancreatectomy- back table preparation of whole pancreas- whole pancreas transplantation- portal vein/superior mesenteric vein conduit- aortoiliac conduit		
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<p>4.2. Demonstrate knowledge of organ procurement and transplantation procedures</p>	<p>Logbook must demonstrate observation of organ procurement and transplantation procedures as relevant to the entry discipline, and must include the breadth of the type of donor (living, deceased, NDD, DCD), as appropriate.</p>	<p>SOT logbook of observed surgical procedures</p>
<p>4.3. Describe techniques to preserve organs and strategies to optimize organ function</p>	<p>Case summary must include a discussion of preservation technique; operative timing, including warm and cold ischemic times; any additional strategies used to optimize function; and effect on immediate organ function.</p>	<p>One (1) case summary of an organ procurement procedure</p>

5. Provision of perioperative care to the organ transplant recipient		
Milestones	Standards of Assessment	Documents to be Submitted
5.1. Manage the early perioperative care of the organ transplant recipient	(a) Logbook must demonstrate the full range of recipient age, co-morbidities, and causes of end organ failure, type of donor, spectrum of early allograft function, and other complications.	(i) SOT logbook of cases
	<p>AND</p> <p>(b) Submissions must illustrate at least two (2) of the following perioperative issues:</p> <ul style="list-style-type: none"> • early allograft dysfunction (immunologic causes, non-immunologic causes) • surgical complications (allograft thrombosis, hemostasis, anastomotic leaks, and ischemic injury) • recurrent disease • early complications of immunosuppression <p>Each case summary must include the indication for organ transplant, description of the perioperative issue, and rationale for the management decision(s).</p>	<p>AND</p> <p>(ii) Three (3) case summaries of patients with perioperative care issues</p>

6. Management of immunosuppression in the organ transplant recipient		
Milestones	Standards of Assessment	Documents to be Submitted
6.1. Select/advise on, adjust, and monitor immunosuppressive regimens to optimize organ function and minimize adverse effects	<p>(a) Submission must demonstrate successful completion of a structured oral examination with content related to the range of immunosuppressive agents used in organ transplantation, and must include:</p> <ul style="list-style-type: none"> • method of action • pharmacokinetics • adverse effects • evidence for appropriate use • appropriate therapeutic drug monitoring strategies 	<p>(i) Documentation of satisfactory completion of a structured oral examination; must include a list of questions asked</p>
	<p>AND</p> <p>(b) The range of cases submitted must include each of the following:</p> <ul style="list-style-type: none"> • choice of induction immunosuppression (<i>one (1) case</i>) • review of maintenance immunosuppression (<i>three (3) cases</i>) due to <ul style="list-style-type: none"> - medication toxicity - infection - malignancy - delayed growth and development (pediatric) • treatment of rejection (<i>one (1) case</i>) <p>Each case summary must include a brief summary of pertinent patient factors leading to the immunosuppressive regime decision.</p>	<p>AND</p> <p>(ii) Five (5) case summaries of immunosuppressive agent use</p>

<p>6.2. Prevent, identify, diagnose, and manage complications related to immunosuppression</p>	<p>The range of cases submitted must include complications related to immunosuppression, including at least two (2) of the following:</p> <ul style="list-style-type: none">• infection• malignancy• other organ dysfunction <p>Case summaries must include a brief description of the current immunosuppressive regimen, the complication, and the rationale for the management plan.</p>	<p>Two (2) cases of immunosuppressive complications</p>
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7. Monitoring of allograft function in organ transplant recipients; and prevention, identification, diagnosis, and treatment of allograft dysfunction, from both immunologic and nonimmunologic causes		
Milestones	Standards of Assessment	Documents to be Submitted
7.1. Apply appropriate strategies for the surveillance of allograft function	<p>Case summaries must demonstrate surveillance of allograft function and patient status at various stages of followup duration.</p> <p>Each case summary must document the duration post-transplant, current clinical issues, and ongoing monitoring plan.</p>	Three (3) clinic notes/case summaries
7.2. Diagnose and manage allograft dysfunction	<p>The range of cases submitted must include at least one (1) case of acute rejection and at least two (2) of the following causes of allograft dysfunction:</p> <ul style="list-style-type: none"> • recurrence of primary disease • acute and/or chronic medication toxicity • technical complications of the allograft procedure • chronic allograft dysfunction <ul style="list-style-type: none"> - immunologic cause - non-immunologic cause <p>Each case summary must include a brief description of the clinical scenario, the diagnostic tests performed and their interpretation, and the rationale for the management plan.</p>	Four (4) case summaries of allograft dysfunction

8. Provision of care to organ transplant recipients with end-stage graft dysfunction

Milestones	Standards of Assessment	Documents to be Submitted
<p>8.1. Evaluate organ transplant recipients with end-stage graft dysfunction for appropriate management</p>	<p>Submissions must include at least two (2) of the following aspects of the care of patients with end-stage organ dysfunction:</p> <ul style="list-style-type: none"> • evaluation for repeat organ transplantation • end-of-life care • initiation of or referral for other life-sustaining therapy <p>Case summaries must include all relevant patient factors, the management plan, and the rationale for that decision.</p>	<p>Two (2) case summaries of end-stage organ dysfunction</p>

9. Advancement of the discipline through participation in scholarly activities		
Milestones	Standards of Assessment	Documents to be submitted
9.1. Complete a scholarly activity in the field of Solid Organ Transplantation	Submission must be one (1) of the following: <ul style="list-style-type: none"> • an abstract or completed manuscript • a research proposal or grant application • a learning module or curriculum or other educational innovation • a completed quality assurance project • a summary of the literature on a topic suitable for publication or as background to a research proposal or policy document 	Submit scholarly activity

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