

Transplantation at a Glance

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Preface

The early attempts at transplantation in the first half of the 20th century were limited by technical challenges and ignorance of the immune response. Half a century later, with an appreciation of some aspects of human immunology, the first successful renal transplant was performed between identical twins. From these beginnings transplantation has progressed from being an experimental treatment available to a few, to a thriving discipline providing life-changing treatment for many. Its power to dramatically transform the quality and quantity of life continues to capture and inspire those involved at all levels of care. Transplantation is a truly multidisciplinary specialty where input from physicians, surgeons, tissue-typists, nurses, coordinators and many others is required in the provision of optimal care. It is also a rapidly moving discipline in which advances in surgical technique and immunological knowledge are constantly being used to improve outcomes. As a newcomer to the field, the breadth of knowledge required can appear bewildering, and it is with this in mind that we have written Transplantation at a Glance. We hope that in this short, illustrated text we have provided the reader with a succinct, yet comprehensive overview of the most important aspects of

transplantation. The book is designed to be easily read and to rapidly illuminate this exciting subject. We have long felt that many aspects of transplantation are best conveyed by diagrammatic or pictorial representation, and it was this conviction that led to the creation of *Transplantation at a Glance*. In particular, the two fundamentals of transplantation, basic immunology and surgical technique, are best learned through pictures. For those approaching transplantation without a significant background in immunology or the manifestations of organ failure, we have provided an up-to-date, crash course that allows the understanding of concepts important in transplantation so that subsequent chapters can be easily mastered. For those without a surgical background, the essential operative principles are simply summarised. Most importantly, throughout the text we have aimed to provide a practical and clinically relevant guide to transplantation which we hope will assist those wishing to rapidly familiarise themselves with the field, regardless of background knowledge.

> MRC CJEW

List of abbreviations

ACR acte cellular rejection; albumin-creatinine ratio ADC antibody-dependent cellular cytotoxicity AID antiduretic hormone BPO cythropoictin AID acute kidney injury BPS encapsulating peritoneal selerosis ALD alcoh-related liver disease ALD alcoh-ymoticated rejection ALD alcoh-related liver disease ALD alcoh-ymoticated rejection ALD alcoh-related liver disease ALD alcoh-ymoticated rejection ALD alcoh-ymoticated rejection alcoh-ymoticated rejection ALD alcoh-ymoticated rejection alcoh-ymoticated liver disease ALD alcoh-ymo	6-MP	6-mercaptopurine	ЕСМО	extra-corporeal membrane oxygenator
ADC ADH Antiduretic hormone AKI acute kidney injury alcohol-related liver disease ALD antide polyopsite kidney disease APD automated peritoneal dialysis APD APD automated peritoneal dialysis APD APD alcohol-related liver disease APR ARB angiotensin receptor blocker AST aspartate transaminase ADD ATO ATO acute tubular necrosis ATO acute tubular necrosis ATO ATO ATO acute tubular necrosis ATO				
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CTA composite tissue allotransplantation CXR chest X-ray DAMP danger/damage-associated molecular pattern DBD donation after brain death DC dendritic cell DC donation after circulatory death DGF delayed graft function DLCO diffusing capacity of the lung for carbon monoxide DSA donor-specific antibodies DTT dithiothreitol EBV Epstein-Barr virus KS Kaposi's sarcoma LVAD left ventricular LVAD left ventricular assist device LVH left ventricular hypertrophy mAb monoclonal antibody mAb monoclonal antibody MAC membrane attack complex MAP mean arterial pressure MELD model for end-stage liver disease MHC major histocompatibility complex MI myocardial infarction	CSF	cerebrospinal fluid	JVP	jugular venous pressure
CXR chest X-ray DAMP danger/damage-associated molecular pattern DBD donation after brain death LVEDP left ventricular assist device LVEDP left ventricular end diastolic pressure LVH left ventricular hypertrophy DCD donation after circulatory death MAC membrane attack complex DLCO diffusing capacity of the lung for carbon monoxide DSA donor-specific antibodies DTT dithiothreitol EBV Epstein-Barr virus LV left ventricular assist device LVH left ventricular nypertrophy MAD menoclonal antibody MAD membrane attack complex MAP mean arterial pressure MELD model for end-stage liver disease MHC major histocompatibility complex MI myocardial infarction	CT	computed tomography	KIR	killer-cell immunoglobulin-like receptor
DAMP danger/damage-associated molecular pattern DBD donation after brain death LVEDP left ventricular assist device LVEDP left ventricular end diastolic pressure LVH left ventricular hypertrophy DCD donation after circulatory death MAC membrane attack complex DLCO diffusing capacity of the lung for carbon monoxide DSA donor-specific antibodies DTT dithiothreitol EBV Epstein-Barr virus LVAD left ventricular assist device LVH left ventricular hypertrophy MAD monoclonal antibody MAC membrane attack complex MAP mean arterial pressure MELD model for end-stage liver disease MHC major histocompatibility complex MI myocardial infarction	CTA	composite tissue allotransplantation	KS	Kaposi's sarcoma
DBD donation after brain death DC dendritic cell DC dendritic cell DCD donation after circulatory death DGF delayed graft function DLCO diffusing capacity of the lung for carbon monoxide DSA donor-specific antibodies DTT dithiothreitol EBV Epstein-Barr virus LVEDP left ventricular end diastolic pressure LVH left ventricular hypertrophy monoclonal antibody membrane attack complex mean arterial pressure MAP mean arterial pressure MELD model for end-stage liver disease MHC major histocompatibility complex MI myocardial infarction	CXR		LV	
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DCD donation after circulatory death DGF delayed graft function DLCO diffusing capacity of the lung for carbon monoxide DSA donor-specific antibodies DTT dithiothreitol EBV Epstein-Barr virus MAD membrane attack complex MAP mean arterial pressure MELD model for end-stage liver disease MHC major histocompatibility complex MI myocardial infarction	DBD		LVEDP	
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DLCO diffusing capacity of the lung for carbon monoxide DSA donor-specific antibodies DTT dithiothreitol EBV Epstein-Barr virus MAP mean arterial pressure MELD model for end-stage liver disease MHC major histocompatibility complex MI myocardial infarction				-
DSA donor-specific antibodies MELD model for end-stage liver disease DTT dithiothreitol MHC major histocompatibility complex EBV Epstein-Barr virus MI myocardial infarction				-
DTTdithiothreitolMHCmajor histocompatibility complexEBVEpstein-Barr virusMImyocardial infarction				
EBV Epstein-Barr virus MI myocardial infarction				
ECG electrocardiogram MMF mycophenolate mofetil		-		
	ECG	electrocardiogram	MMF	mycophenolate mofetil