

MRRB NOTIFICATION FORM (GRAFT KIDNEY BIOPSY)

Instruction: Where check boxes ☐ are provided, check (✓) one or more boxes. Where radio buttons ☐ are provided, check (✓) one box only. * indicates compulsory field.

Office use:		/	
Centre:			

*A. Centre Name:

*B. Date of Notification (dd/mm/yyyy) - -

*C. Type of Biopsy : **Graft kidney biopsy**

D.i) GFR: (Auto)

D.ii) CKD Grade: (Auto)

SECTION 1 : PATIENT PARTICULARS

*1. Patient Name :			2. RN:	
*3. Identification Card Number :	MyKad / MyKid:	- -	Old IC:	
	Other document No:		Specify type (eg.passport, armed force ID):	
*4. Date of Birth (dd/mm/yy):	- -	*5. Gender:	☐ Male ☐ Female	
*6. Ethnic Group:	☐ Malay ☐ Chinese ☐ Indian			
	☐ Other M'sian, specify : ☐ Foreigner, specify :			

SECTION 2 : CLINICAL DATA AT PRESENTATION TO NEPHROLOGIST

1. Date : (dd/mm/yy) (If exact date not known, pls estimate date)	a. Date of ESKD: - -	b. Date of Transplant: - -
	☐ NA	*

2. Indications for biopsy: (Tick where applicable)

a. *Urine abnormalities	b. * Graft function	c. Other
☐ Yes ☐ No ☐ Isolated hematuria ☐ Hematuria and proteinuria ☐ Isolated proteinuria ☐ Nephrotic range proteinuria ☐ Gross hematuria	☐ Stable ☐ Acute deterioration of graft function ☐ Gradual deterioration of graft function ☐ Delayed graft function immediate post transplant	☐ Inconclusive previous biopsy ☐ Inadequate response to treatment ☐ Evaluate response to treatment ☐ Protocol biopsy ☐ Surveillance ☐ Others, specify:

3. Primary Disease of ESKD	☐ Biopsy proven glomerulonephritis, specify : ☐ Unknown	
	☐ Likely Glomerulonephritis, not biopsy proven ☐ Hypertension ☐ ADPKD ☐ Drugs / toxic nephropathy ☐ Hereditary nephritis, specify ☐ CAKUT ☐ Diabetes Mellitus ☐ Others, specify	

4. Prior to Biopsy:	a. Weight (kg): ☐ Not taken	c. Dialysis required : ☐ Yes ☐ No
	b. Height (cm): ☐ Not taken	

5. Medication at Biopsy *	i. Immunosuppressive Drugs																
	<table border="1"> <tr> <td>a. Corticosteroids</td> <td>d. mTOR inhibitors</td> </tr> <tr> <td>☐ Yes ☐ No</td> <td>☐ Yes ☐ No</td> </tr> <tr> <td>b. Calcineurin inhibitors</td> <td>☐ Everolimus ☐ Sirolimus</td> </tr> <tr> <td>☐ Yes ☐ No</td> <td></td> </tr> <tr> <td>☐ Cyclosporin ☐ Tacrolimus</td> <td></td> </tr> <tr> <td>c. Anti-metabolites</td> <td></td> </tr> <tr> <td>☐ Yes ☐ No</td> <td></td> </tr> <tr> <td>☐ Mycophenolate mofetil ☐ Mycophenolic sodium ☐ Azathioprine</td> <td></td> </tr> </table>		a. Corticosteroids	d. mTOR inhibitors	☐ Yes ☐ No	☐ Yes ☐ No	b. Calcineurin inhibitors	☐ Everolimus ☐ Sirolimus	☐ Yes ☐ No		☐ Cyclosporin ☐ Tacrolimus		c. Anti-metabolites		☐ Yes ☐ No		☐ Mycophenolate mofetil ☐ Mycophenolic sodium ☐ Azathioprine
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	ii. Induction therapy (if biopsy is done within 6 months of transplant)																
	☐ IV methylprednisolone ☐ Others, specify: ☐ Basiliximab ☐ Thymoglobulin ☐ Rituximab																

SECTION 3 : LAB DATA

1. Haematology:	Unit	Value
a. Hb	g/dL	☐ Not available
b. TWC	10 ⁹ /L	☐ Not available
c. Platelet	10 ⁹ /L	☐ Not available

2. Urine:		
a. Urine RBC:	☐ Yes → <u>Urine dipstick</u> ☐ 1+ ☐ 2+ ☐ 3+ ☐ Not available ☐ No <u>Urine microscopy</u> ☐ 20-50 cells/ul ☐ >50 cells/ul	
b. Urine Protein:	☐ Yes → ☐ 1+ ☐ 2+ ☐ 3+ ☐ 4+ ☐ No ☐ Not available	
c. 24 hrs Urine Protein, (g/day)		☐ Not available
d. Urine PCI/PCR	☐ mg/mg ☐ mg/g ☐ mg/mmol ☐ g/mmol mg/mmol	☐ Not available
e. Urine ACR	☐ mg/mg ☐ mg/g ☐ mg/mmol ☐ g/mmol mg/mmol	☐ Not available

3. Biochemistry:				Date
a. Albumin	 Autocalc	☐ g/L ☐ g/dL g/L	☐ Not available	/ /
b. Creatinine (If on dialysis give pre dialysis result) *	 Autocalc	☐ umol/L ☐ mg/dL mg/mmol	☐ Not available	/ /
c. CMV PCR	Level: IU/ml ☐ Undetectable Level: IU/ml ☐ Undetectable Level: IU/ml ☐ Undetectable	☐ Not done ☐ Not done ☐ Not done	, , , , , ,	
d. BKV PCR	Level: IU/ml ☐ Undetectable Level: IU/ml ☐ Undetectable Level: IU/ml ☐ Undetectable	☐ Not done ☐ Not done ☐ Not done	, , , , , ,	
e. Others				, ,
f. eGFR	Autocalc			
g. CKD Grade	Autocalc			

SECTION 4 : HPE DATA

*1a. Date Biopsy (dd/mm/yy):	1b. Is this the first allograft biopsy? ☐ No ☐ Yes → Biopsy Count:								
2a. Biopsy specimen sent to:	Name of Histopathology Lab:								
2b. Biopsy read by :	Histopathologist Name :								
2c. HPE Report Number:	/								
3. Biopsy Report(Hispathology Examination, HPE)	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:40%;">a) Total Number of glomeruli reported:</td> <td style="width:60%; text-align: right;"><i>[If report shown 'no glom' please enter as '0']</i></td> </tr> <tr> <td style="vertical-align: top;"> b) Immunofluorescence/ Immunohistochemistry </td> <td style="vertical-align: top;"> ☐ Yes → ☐ IgG ☐ IgA ☐ IgM ☐ C3 ☐ C1q ☐ Kappa ☐ PLA2R ☐ C4d ☐ Lambda ☐ Negative ☐ No → ☐ Not done ☐ Not sent ☐ No glomeruli Remark: </td> </tr> <tr> <td style="vertical-align: top;"> c) Additional staining </td> <td style="vertical-align: top;"> ☐ Congo red ☐ Others, specify </td> </tr> <tr> <td style="vertical-align: top;"> d) Electronmicroscopy </td> <td style="vertical-align: top;"> ☐ Yes ☐ No </td> </tr> </table>	a) Total Number of glomeruli reported:	<i>[If report shown 'no glom' please enter as '0']</i>	b) Immunofluorescence/ Immunohistochemistry	☐ Yes → ☐ IgG ☐ IgA ☐ IgM ☐ C3 ☐ C1q ☐ Kappa ☐ PLA2R ☐ C4d ☐ Lambda ☐ Negative ☐ No → ☐ Not done ☐ Not sent ☐ No glomeruli Remark:	c) Additional staining	☐ Congo red ☐ Others, specify	d) Electronmicroscopy	☐ Yes ☐ No
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4. HPE Diagnosis (specify):									
5.HPE Diagnosis:	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:20%; vertical-align: top;"> i) ☐ Report not conclusive ☐ No / not enough glomeruli ☐ Others, specify : </td> <td style="width:80%; vertical-align: top;"> ii) Diagnosis classification ☐ a. Normal biopsy ☐ b. Antibody mediated changes ☐ Acute ABMR ☐ Chronic Active ABMR ☐ Chronic ABMR ☐ c. Suspicious (borderline) for acute T cell-mediated rejection ☐ d. T cell-mediated rejection ☐ 1. Acute TCMR ☐ Type IA ☐ Type III ☐ Type IB ☐ Type IIA ☐ Type IIB ☐ 2. Chronic active TCMR ☐ Grade IA ☐ Grade IB ☐ Grade II </td></tr></table>	i) ☐ Report not conclusive ☐ No / not enough glomeruli ☐ Others, specify :	ii) Diagnosis classification ☐ a. Normal biopsy ☐ b. Antibody mediated changes ☐ Acute ABMR ☐ Chronic Active ABMR ☐ Chronic ABMR ☐ c. Suspicious (borderline) for acute T cell-mediated rejection ☐ d. T cell-mediated rejection ☐ 1. Acute TCMR ☐ Type IA ☐ Type III ☐ Type IB ☐ Type IIA ☐ Type IIB ☐ 2. Chronic active TCMR ☐ Grade IA ☐ Grade IB ☐ Grade II						
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☐ **e. Other non-rejection changes**

☐ **1. Acute Tubular necrosis**
☐ **2. Interstitial fibrosis and tubular atrophy**
☐ **3. Infective:**

☐ BK Polyoma Virus nephropathy
☐ CMV nephritis
☐ Concomitant BKV CMV nephritis
☐ Bacterial pyelonephritis

☐ **4. Infiltrative:**
☐ PTLD
☐ Others:

☐ **5. CNI toxicity:**
☐ Acute
☐ Chronic

☐ **6. Glomerulonephritis:**

☐ **a. Type**
☐ Recurrent disease
☐ De Novo GN
☐ Uncertain

☐ **b. Specify Histological Type:**
☐ Minimal Change
☐ FSGS
☐ IgA nephropathy
☐ Membranous nephropathy
☐ Crescentic GN
☐ Post infectious GN
☐ Others, specify:

☐ **7. Diabetic nephropathy**
☐ **8. Interstitial nephritis**

☐ Acute
☐ Chronic

☐ **9. Advanced glomerulosclerosis**
☐ **10. Infarcted Kidney**
☐ **11. Others, specify:**

SECTION 4 : HPE DATA (continued)

6. Banff lesion score:

Total:

☐ Not Available ☒ Yes

Banff lesion score	Abbr	0	1	2	3
6a. Interstitial inflammation	i	☐ <10%	☐ 10-25%	☐ 26-50%	☐ >50
6b. Tubulitis	t	☐ None	☐ 1-4/tubular cross section or 10 tubular epithelial cells	☐ 5-10	☐ >10 or foci of tubular basement membrane destruction with i≥2 and t2 elsewhere
6c. Intimal arteritis	v	☐ None	☐ <25% luminal area lost	☐ ≥25% luminal area	☐ Transmural and/or fibrinoid change and medial smooth muscle necrosis
6d. Glomerulitis	g	☐ None	☐ <25%	☐ 25-75%	☐ >75%
6e. Peritubular capillaritis	ptc	☐ <3 leukocytes /PTC	☐ ≥1 leukocyte in ≥ 10% of PTCs with max. of 3-4/PTC	☐ ≥1 leukocyte in ≥ 10% of PTCs with max. of 5-10/PTC	☐ ≥1 leukocyte in ≥ 10% of PTCs with max. of >10/PTC
6f. C4d	C4d	☐ None	☐ <10%	☐ 10-50%	☐ >50%
6g. Interstitial fibrosis	ci	☐ ≤5%	☐ 6-25%	☐ 26-50%	☐ >50%
6h. Tubular atrophy	ct	☐ None	☐ ≤25%	☐ 26-50%	☐ >50%
6i. Vascular fibrous Intimal thickening	cv	☐ None	☐ ≤25%	☐ 26-50%	☐ >50%
6j. GBM double contours	cg	☐ None	☐ 1a: only by EM 1b: ≤25% by LM	☐ 26-50%	☐ >50%
6k. Mesangial matrix expansion	mm	☐ None	☐ ≤25%	☐ 26-50%	☐ >50%
6l. Arteriolar hyalinosis	ah	☐ None	☐ Mild to moderate	☐ Mild to severe in >1	☐ Severe in many
6m. Hyaline arteriolar thickening	aah	☐ None	☐ 1 without circumferential	☐ ≥1 without circumferential	☐ circumferential
6n. Total inflammation	ti	☐ <10%	☐ 10-25%	☐ 26-50%	☐ >50%
6o. Inflammation in the area of IFTA	i-IFTA	☐ <10%	☐ 10-25%	☐ 26-50%	☐ >50%