

Contents

1.0	Scope.....	1
2.0	Recommendations.....	1
	Appendix 1: Dialyzer Selection for BC Hemodialysis Patients (Adults).....	2
	Appendix 2: Dialyzer Specification & Substitution Chart for Out-of-Province Patients (Adults).....	3

1.0 Scope

The purpose of the guideline is to:

1. Standardize the procedure for selecting a dialyzer for BC patients on hemodialysis (HD).
2. Provide recommendations to assist with decisions on dialyzer selection for out-of-province patients travelling to BC for dialysis.

Considerations in the development of this guideline included:

- Clinical requirements
- Contractual obligations for provincial dialyzer utilization
- Cost of individual dialyzers

This guideline applies to adults receiving hemodialysis (HD) and hemodialfiltration (HDF) in:

- In-centre HD units.
- Community dialysis units (CDUs).

This guideline does not apply to:

- Children receiving hemodialysis (dialyzer preferences are different than for adults).
- Patients receiving home hemodialysis.

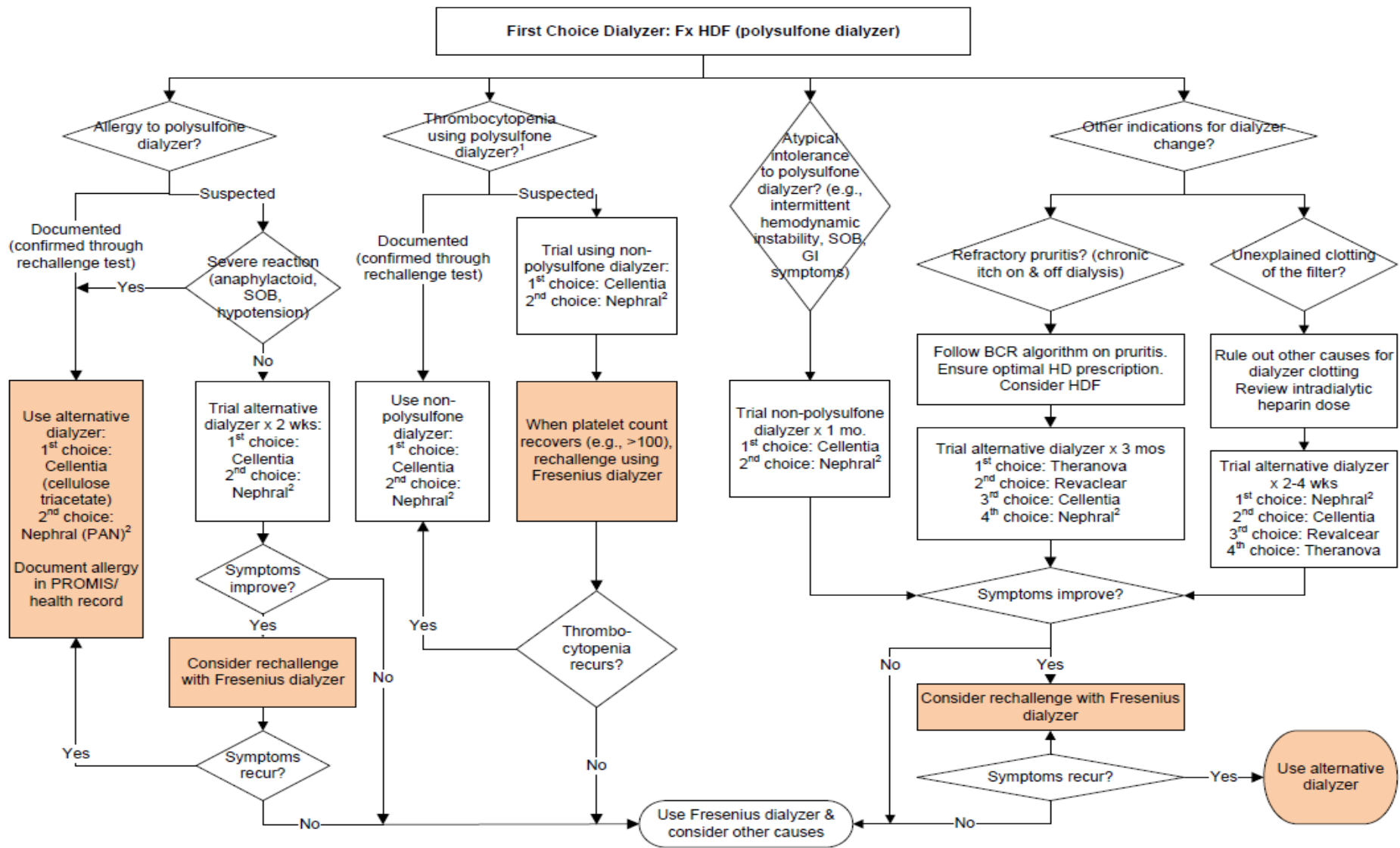
2.0 Recommendations

Recommendation #1: Utilize Appendix 1 for dialyzer recommendations for BC patients on hemodialysis (HD).

For most patients, a Fresenius dialyzer (Fx HDF) is an excellent and cost-effective dialyzer (#1 choice). Specific patient situations, however, may require an alternative dialyzer be used (e.g., allergy or thrombocytopenia related to polysulfone dialyzer). Refer to Appendix 1.

Recommendation #2: Utilize Appendix 2 for dialyzer recommendations for out-of-province patients travelling to BC for HD.

Appendix 1: Dialyzer Selection for BC Hemodialysis Patients (Adults)



- Notes:
1. For suspected dialyzer associated thrombocytopenia, a pre and post dialysis platelet count is recommended.
 2. Avoid ACEi if using Nephral dialyzer.
 3. For specific rare cases where there is persistent dialyzer clotting and loss of bundle volume leading to poor clearances, consider wet dialyzer RX 25.
 4. Considerations utilized in making dialyzer recommendations: (a) Clinical requirements; (b) Contractual obligations for provincial dialyzer utilization; & (c) Cost of individual dialyzers

Appendix 2: Dialyzer Specification & Substitution Chart for Out-of-Province Patients (Adults)

The purpose of this chart is to with assist with decisions on dialyzer selection for out-of-province patients travelling to BC for dialysis.

If a dialyzer is on the provincial contract, then no substitution is required. If a dialyzer is not on the provincial contract, then a BC “equivalent” dialyzer is suggested, based on (a) clinical specifications (b) contractual obligations for provincial dialyzer utilization; and (c) cost of individual dialyzers.

If a dialyzer is required where there is no appropriate BC “equivalent,” it can be purchased at non-contract prices with pre specified quantities, however; the preference is to use a dialyzer that is on the provincial contract.

For BC patients, refer to Appendix 1 “Dialyzer Selection for BC Hemodialysis Patients.”

Dialyzer	BC Prov Contract	Membrane Material	Surface area (m ²)	Priming volume (mL)	Kuf (mL/hr/mmHg)	Sterilization	KoA urea	Reported Clinical Benefits	Approved for HDF	Cautions & Potential for Cross-Reactivity	Suggested BC Equivalent Dialyzer
Fresenius Medical Care											
FX HDF 600	Y	Polysulfone	1.5	97	52	Inline steam		Designed for high volume HDF	Yes	Polysulfone sensitivity (PS) Reports of thrombocytopenia in the literature (Higher risk with Electron beam disinfection)	
FX HDF 800	Y		1.8	118	63						
FX HDF 1000	Y		2.2	138	75						
FX 40	Y		0.6	32							
Fx CorDiax 40	Y		0.6	32	21		547				
Fx CorDiax 50	Y		1.0	53	33		886				
Fx CorDiax 60	Y		1.4	74	47		1164				
Fx CorDiax 80	Y		1.8	95	64		1429				
Fx CorDiax 100	Y		2.2	116	74		1545				
Fx CorDiax 120	Y		2.5	132	87		1584				
Fx CorDiax Steam High Flux	Y		1.6	95							
Fx CorDiax 800	Y		2.0	115	62		1365				
Fx CorDiax 1000	Y		2.3	136	76		1421				
Optiflux HF80S	Y		1.8	110	55		-				
Fx PAED	Y		0.2	18	7	170					
Optiflux F3	Y		0.4	24	1.7	231					
Optiflux F80A	Y		1.8	83	55	-					
Optiflux F160NR	N		1.5	84	45	1064		Optiflux F160NRE			
Optiflux F180NR	N		1.7	105	58	1145		Optiflux F200NRE			
Optiflux F200NR	N		2.0	113	56	1317		Optiflux F200NRE			
Optiflux F160NRE	Y	1.5	87	61	1167						
Optiflux F200NRE	Y	1.9	113	74	1415						
Optiflux F250NR	N	2.5	135	107	1662		Fx CorDiax 120				

Appendix 2: Dialyzer Specification & Substitution Chart for Out-of-Province Patients (Adults)

Dialyzer	BC Prov Contract	Membrane Material	Surface area (m ²)	Priming volume (mL)	Kuf (mL/hr/mmHg)	Sterilization	KoA urea	Reported Clinical Benefits	Approved for HDF	Cautions & Potential for Cross-Reactivity	Suggested BC Equivalent Dialyzer
Baxter Gambro International Inc.											
Nephral 300ST	Y	Acrylonitrile (AN-69 ST)	1.3	81	40	Gamma Ray	-	ST coating may reduce heparin requirements if primed with pre-heparinized saline	Yes	Caution with ACE inhibitor as risk of anaphylactoid reaction; Suggest switch to ARB.	
Nephral 400ST	Y		1.65	98	50		-				
Nephral 500ST	Y		2.15	126	65		-				
Nephral 400	N		1.65	99	50		-				Nephral 400ST
Nephral 500	N		2.15	126	65		-				Nephral 500ST
Baxter International Inc.											
Polyflux 6H	Y	Polyarylethersulfone	0.6	52	33	Steam	465	Modestly improved middle molecule clearance over PS dialyzers	Yes	Potential cross-reactivity with PS sensitivity	
Polyflux 2H	Y		0.2	15	15		-				
Polyflux Revaclear	N		1.4	84	50		1167				Revaclear®300
Polyflux Revaclear MAX	N		1.8	100	60		1487				Revaclear®400
Revaclear®300	Y		1.4	300	48		1186				
Revaclear®400	Y		1.8	300	54		1439				
Polyflux 210H	Y		Polyarylethersulfone, polyvinylpyrrolidone & polyamide								Steam
Theranova 400	Y	Polyarylethersulfone and Polyvinylpyrrolidone blend BPA free	1.7	91	48	Steam	1482	"Medium Cut-off" Dialyzer providing clearance of large middle molecules including light chains – clinical significance remains uncertain	Not approved as would increase loss of albumin, large molecules	Potential cross-reactivity with PS sensitivity	
Theranova 500	Y		2.0	105	59		1630				Albumin loss of 1-4g per HD (range 1-9g in clinical studies), less than high cut-off
Exeltra 170	N	Cellulose Triacetate	1.7	105	33.80	Gamma Ray			1103		Cellentia 17H
Exeltra 190	N		1.9	115	36.42				1214		Cellentia 19H
Exeltra 210	N		2.1	125	47.36				1714		Cellentia 21H
Cardiomed											
Cellentia 17H	Y	Cellulose Triacetate	1.7	98	45	Gamma Ray		Good biocompatibility Modestly improved middle molecule clearance over PS dialyzers BPA and DEHP free	Yes		
Cellentia 19H	Y		1.9	110	48						
Cellentia 21H	Y		2.1	122	52						

Appendix 2: Dialyzer Specification & Substitution Chart for Out-of-Province Patients (Adults)

Dialyzer	BC Prov Contract	Membrane Material	Surface area (m ²)	Priming volume (mL)	Kuf (mL/hr/mmHg)	Sterilization	KoA urea	Reported Clinical Benefits	Approved for HDF	Cautions & Potential for Cross-Reactivity	Suggested BC Equivalent Dialyzer
Elisio-17H	N	Polyether-sulfone	1.7	105	74	Gamma Ray	1614	Good biocompatibility Modestly improved middle molecule clearance over PS dialyzers; BPA and DEHP free	Yes	Potential cross-reactivity with PS sensitivity	Revaclear®400
Elisio-19H	N		1.9	115	76		1771				Revaclear®400
Elisio-21H	N		2.1	130	82		1976				Revaclear®400
Elisio-17M	N		1.7	108	22		1145				Revaclear®400
Elisio-19M	N		1.9	115	25		1292				Revaclear®400
Elisio-21M	N		2.1	128	27		1450				Revaclear®400
Xenium H11	N		Polyether-sulfone	1.1	69		59				Gamma Ray
Xenium H13	N	1.3		83	64	1122	Revaclear®300				
Xenium H15	N	1.5		93	67	1328	Revaclear®300				
Xenium H17	N	1.7		106	74	1545	Revaclear®400				
Xenium H19	N	1.9		115	76	1808	Revaclear®400				
Xenium H21/H21B	N	2.1		128	82	2036	Revaclear®400				
Chief Medical											
Rexeed 15A	Y	Polysulfone	1.5	86	72	Gamma Ray	1190	Wet type dialyzer Higher clearance of small molecules and lower molecular proteins			
Rexeed 18A	Y		1.8	103	71		1415				
Rexeed 21A	Y		2.1	117	93		1569				
Rexeed 25A	Y		2.5	137	104		1714				

Appendix 2: Dialyzer Specification & Substitution Chart for Out-of-Province Patients (Adults)

Dialyzer	BC Prov Contract	Membrane Material	Surface area (m ²)	Priming volume (mL)	Kuf (mL/hr/mmHg)	Sterilization	KoA urea	Reported Clinical Benefits	Approved for HDF	Cautions & Potential for Cross-Reactivity	Suggested BC Equivalent Dialyzer
Toray											
BG-2.1U	N	Polymethyl-methacrylate (PMMA)	2.1		43	Gamma Ray		Highly adsorptive - adsorbs intact PTH, uremic toxins, light chains; Improved pruritus compared to PS; May enhance response to HBV vaccine; May preserve muscle mass in elderly	Not advised Unable to achieve high convective volumes	Adsorption may decrease small and middle molecule diffusive clearance	No direct substitute. Consider alternate based on clinical history.
Bellco (Medtronic)											
Phylther HF 22 SC	N	Poly-phenylene	2.2		75	Steam		Comparable light chain clearance with HDF compared to high cut off dialyzers in one small study	Yes	Limited familiarity with product in BC	No direct substitute. Consider alternate based clinical history.
Phylther HF 20 SD	N							Modestly improved middle molecule clearance over PS dialyzers			

Excludes NxStage (used in HHD only)