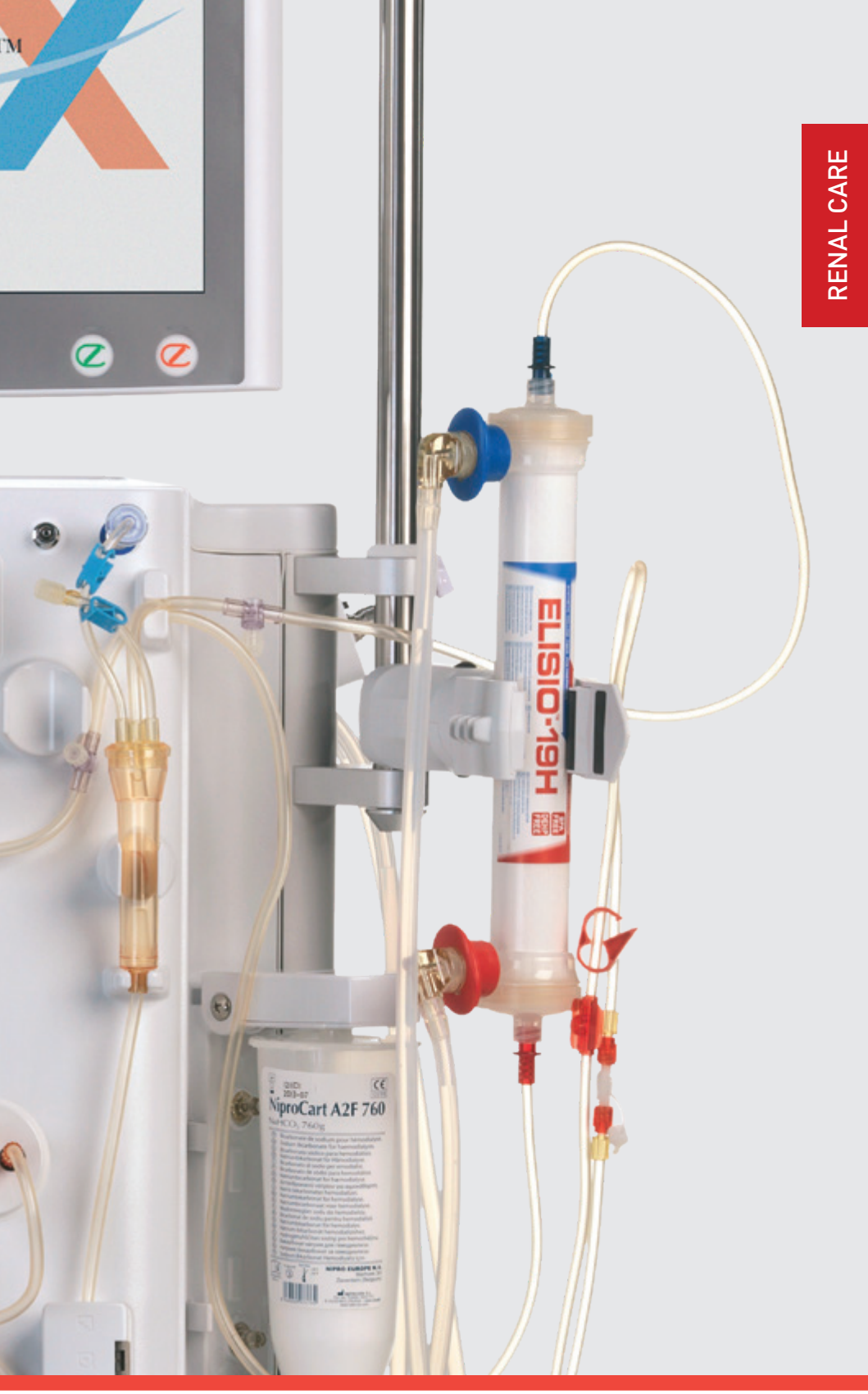
RENAL CARE



ELISIO™

SYNTHETIC POLYNEPHRON HOLLOW-FIBER DIALYZER

NIPRO
MEDICAL EUROPE

Elisio's membrane type improves survival for dialysis patients

A study by Dr Abe (Fig. 1) showed a reduction of mortality rate by more than 10% for the group who received polyethersulfone (PES) membranes compared to the polysulfone membrane group.

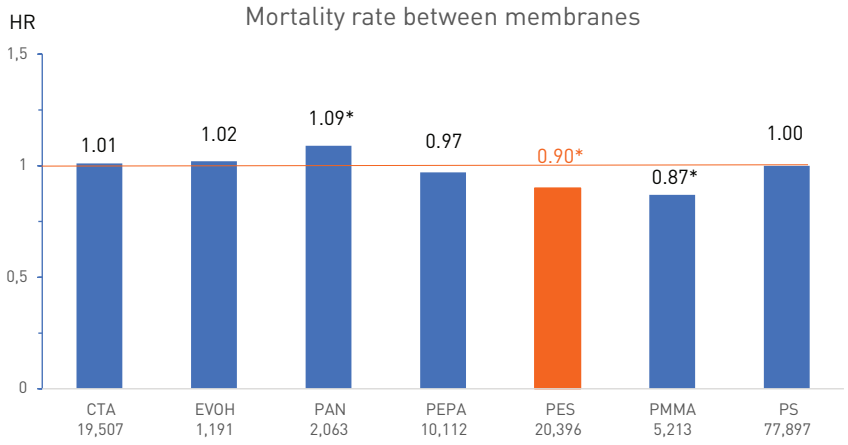


Fig. 1: High-Performance Membrane Dialyzers and MOrtality in Hemodialysis Patients. Hazard Ratio of all-cause mortality among 7 types of dialyzer membranes in 136.676 patients undergoing maintenance hemodialysis using standard Cox proportional hazards regression.

Reduces middle size molecules

A comparative study of the most widely used membranes has shown that Elisio H performs well in terms of both ß2M and myoglobin reduction.

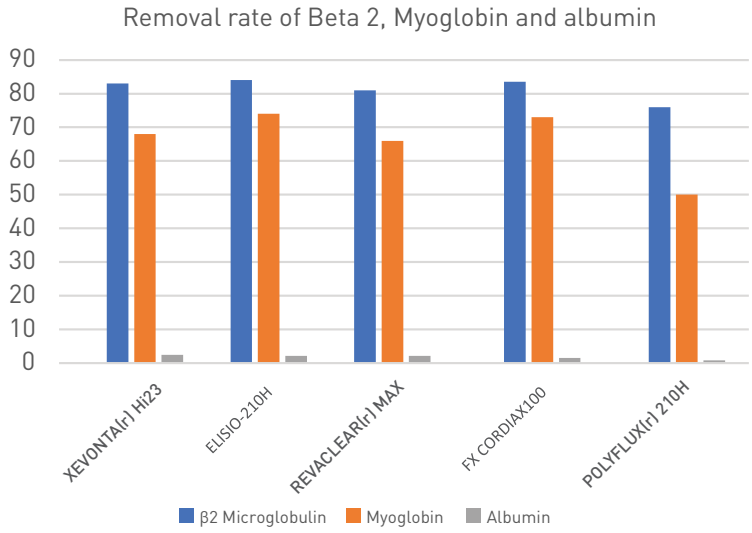


Fig. 2: Are all dialyzers compatible witht he convective volumes suggested for postdilution online hemodiafiltration. Qb: 350 ml/min, Qd: 600ml/min and QV: 23l.

Elisio-H has excellent biocompatible attributes. Their characteristics improve patient well-being and treatment outcome.

Maintains level of albumin

Serum albumin is a well-known marker to assess the quality of care in dialysis patients.

The choice of the dialyzer may affect the amount of albumin loss during a hemodialysis session.

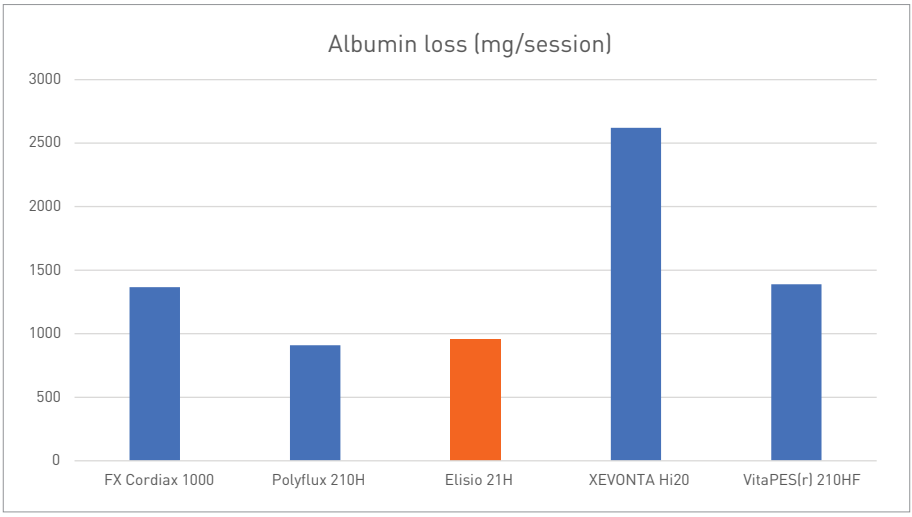


Fig. 3: Removal capacity of different high flux dialyzers during postdilution online hemodiafiltration.

Minimizes platelet activation

In this study, Elisio-H demonstrates a superior profile in platelet loss compared to other synthetic membranes.

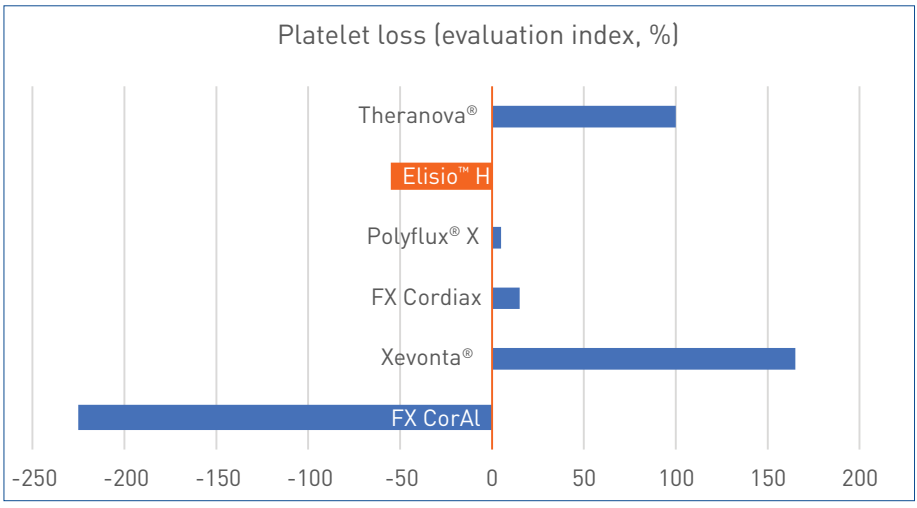


Fig. 4: PVP in hemodialysis membranes: Impact on platelet loss during hemodialysis.

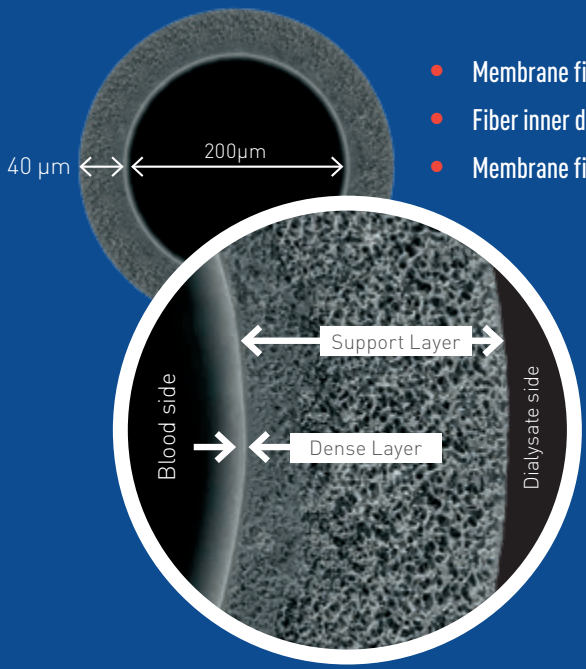
Elisio-H covers the multiple and distinct needs of your dialysis patients for hemodialysis or high volume hemodiafiltration.

ELISIO-H

a Polynephron™ membrane made with polyethersulfone (PES) offers the following advantages for your dialysis patients:

- **Clearances of middle molecular weight (MW) molecules**
- **Retention of albumin**
- **Biocompatibility**
- **Not made with BPA**
- **Low inflammation induction**
- **Good endotoxin retention**
- **Low thrombogenicity**
- **Reduced platelet loss**
- **Environmentally-friendly**

Outstanding performance



- Membrane fiber with an asymmetric structure
- Fiber inner diameter of 200 µm
- Membrane fiber wall of 40 µm

- Dense layer improves the diffusion efficiency
- Larger support layer enhances the mechanical strength of the fibers

ELISIO-H allows excellent clearances for β2-microglobulin and myoglobin.

Compared to the most common synthetic membranes on the market, ELISIO-H can be used in HD, HF, and HDF (pre- and post-dilution) with minimal loss of albumin in HDF.

ELISIO- H

HIGH FLUX

Performance

Clearance (ml/min)[5]	Qb/ Qd (ml/min)	09H	11H	13H	15H	17H	19H	21H	25H
Urea	200/500	189	192	195	197	198	199	200	200
	300/500	243	253	263	270	275	280	284	293
	400/500	274	291	311	323	332	343	346	361
	400/800	300	325	344	357	362	370	377	385
	500/800	332	363	388	406	417	427	432	457
Creatinine	200/500	175	183	191	194	196	197	198	200
	300/500	213	228	240	252	259	268	269	282
	400/500	237	252	273	288	299	309	319	337
	400/800	265	294	316	331	342	349	355	375
	500/800	282	320	346	363	383	404	410	426
Phosphate	200/500	160	164	170	176	179	183	188	193
	300/500	195	209	224	233	245	251	256	274
	400/500	220	240	255	271	288	296	304	322
	400/800	235	254	280	298	313	325	330	346
	500/800	254	282	315	333	352	368	373	400
Vitamin B12	200/500	114	125	137	148	156	162	165	177
	300/500	128	145	161	173	185	195	198	219
	400/500	132	153	174	188	202	215	219	242
	400/800	141	171	193	209	227	240	250	270
	500/800	151	178	204	223	242	259	264	291
Inulin	200/500	77	82	90	97	105	115	120	149
	300/500	84	86	97	109	117	127	138	166
	400/500	86	90	100	116	126	137	145	176
	400/800	91	92	106	120	128	140	150	185
	500/800	94	97	112	122	135	148	158	203
Myoglobin	200/500	55	61	70	78	88	94	98	112
	300/500	58	64	78	89	96	101	103	123
	400/500	61	70	82	92	104	110	113	132
	400/800	64	71	84	95	106	111	116	137
	500/800	65	81	90	104	110	117	124	141

Ultrafiltration Coefficient

KUF (ml/hr/mmHg)[6]	53	59	64	67	74	76	82	93

Sieving Coefficient[7]

Vitamin B12	0.989[5]
Inulin	0.94
β2-microglobulin	1.02
Myoglobin	0.61
Albumin	0.0017

Specifications

Effective surface area (m^2)		0.9	1.1	1.3	1.5	1.7	1.9	2.1	2.5
Priming volume (ml)		62	70	85	95	105	115	130	149
Effective length (mm)		212	228	245	259	271	281	290	305
Inner Diameter (µm)		200	200	200	200	200	200	200	200
Membrane thickness (µm)		40	40	40	40	40	40	40	40
Maximum TMP (mmHg)		500	500	500	500	500	500	500	500
Material	Membrane	Polynephron™							
	Housing and Header	Polypropylene							
	Potting compound	Polyurethane							
Sterilization method		Dry gamma							
Package		24 pcs/box							

Fig 1. Abe M, Hamano T, Wada A, Nakai S, Masakane I. High-Performance Membrane Dialyzers and Mortality in Hemodialysis Patients: A 2-Year Cohort Study from the Annual Survey of the Japanese Renal Data Registry. American journal of nephrology. 2017;46(1):82-92.

Fig 2. Potier J, Queffeulou G, Bouet J. Are all dialyzers compatible with the convective volumes suggested for postdilution online hemodiafiltration? The International journal of artificial organs. 2016;39(9):460-70.

Fig 3. Santos García A, Macías Carmona N, Vega Martínez A, Abad Estébanez S, Linares Grávalos T, Aragoncillo Sauco I, et al. Removal capacity of different high flux dialyzers during postdilution online hemodiafiltration. Hemodialysis international International Symposium on Home Hemodialysis. 2019;23(1):50-7.

Fig 4. Zawada AM, Melchior P, Erlenkötter A, Delinski D, Stauss-Grabo M, Kennedy JP. Polyvinylpyrrolidone in hemodialysis membranes: Impact on platelet loss during hemodialysis. Hemodialysis international International Symposium on Home Hemodialysis. 2021.

5. *In vitro* test condition (EN1283, ISO 8637: 2010): Qf 0 ml/min.

6. KUF (EN1283, ISO 8637: 2010): Bovine Blood. (Hct 32±2%, Protein 60 g/l, 37°C), Qb 300 ml/min.

7. SC (EN1283, ISO 8637: 2010): Qb 300 ml/min, Qf 60 ml/min.

Clearance data obtained in Japan. Clearance data can vary slightly depending on the test setup, lot nr., and production site.

Nipro Renal Care is part of Nipro Corporation Japan, a leading global healthcare company established in 1954. With over 35.000 employees worldwide, Nipro serves the Medical Device, Pharmaceutical, and Pharmaceutical Packaging industries.

Nipro Renal Care is a global market leader with over 6 decades providing renal solutions for dialysis and dialysis-related treatment. We specialize in developing dialysis machines, water treatment systems, and a comprehensive portfolio of disposable medical equipment.

In order to address the needs of patients, healthcare professionals, and procurement managers alike, Nipro Renal Care is driven by innovation and patient safety to offer the highest quality products that optimize time, effort, and costs.

BECAUSE EVERY LIFE DESERVES AFFORDABLE CARE

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