

Necessidades para otimização do processo de hemodiálise

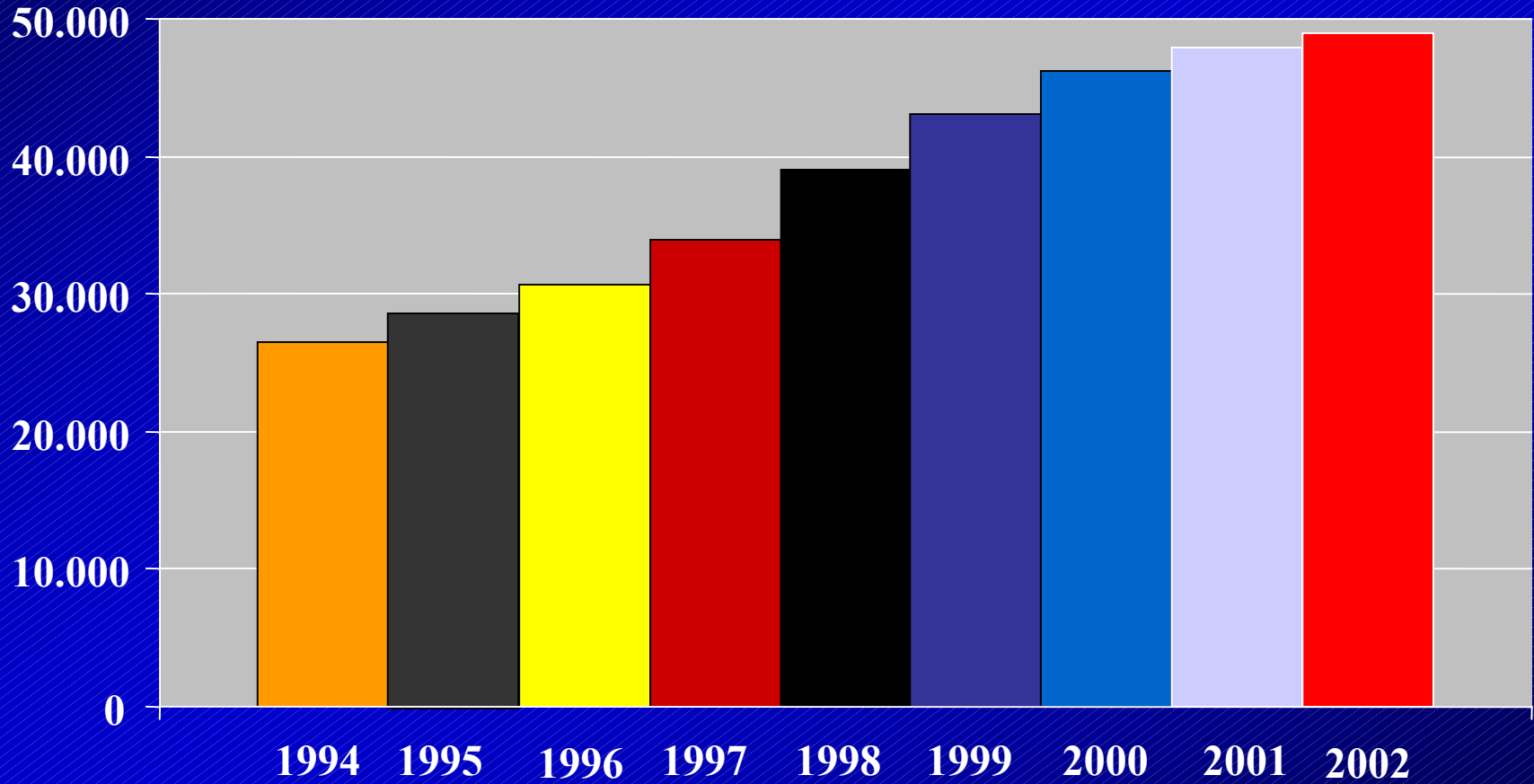
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Diálise no Brasil

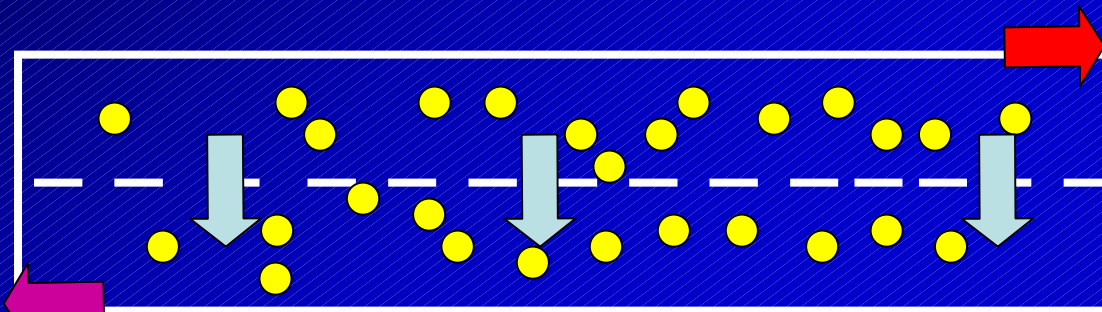
Pacientes





Transporte de solutos

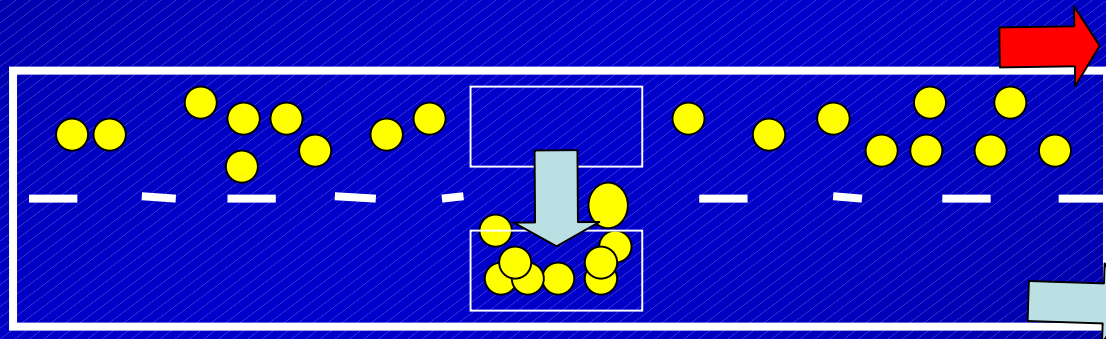
Difusão



Gradiente de concentração

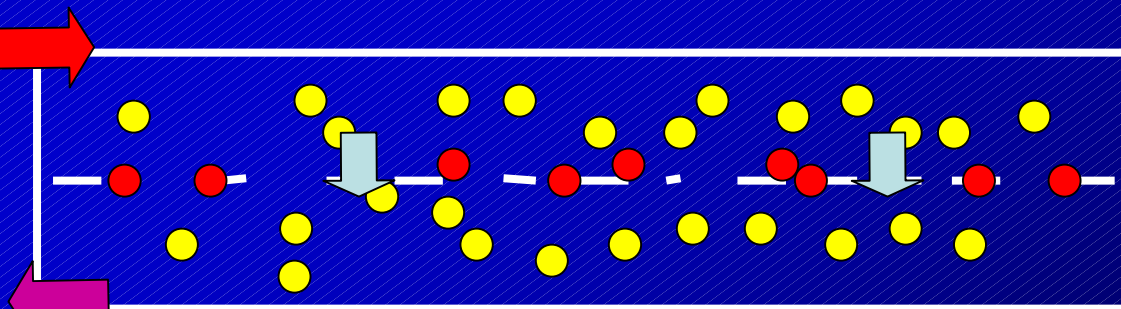
Dialisato

Convecção



Gradiente hidrostático

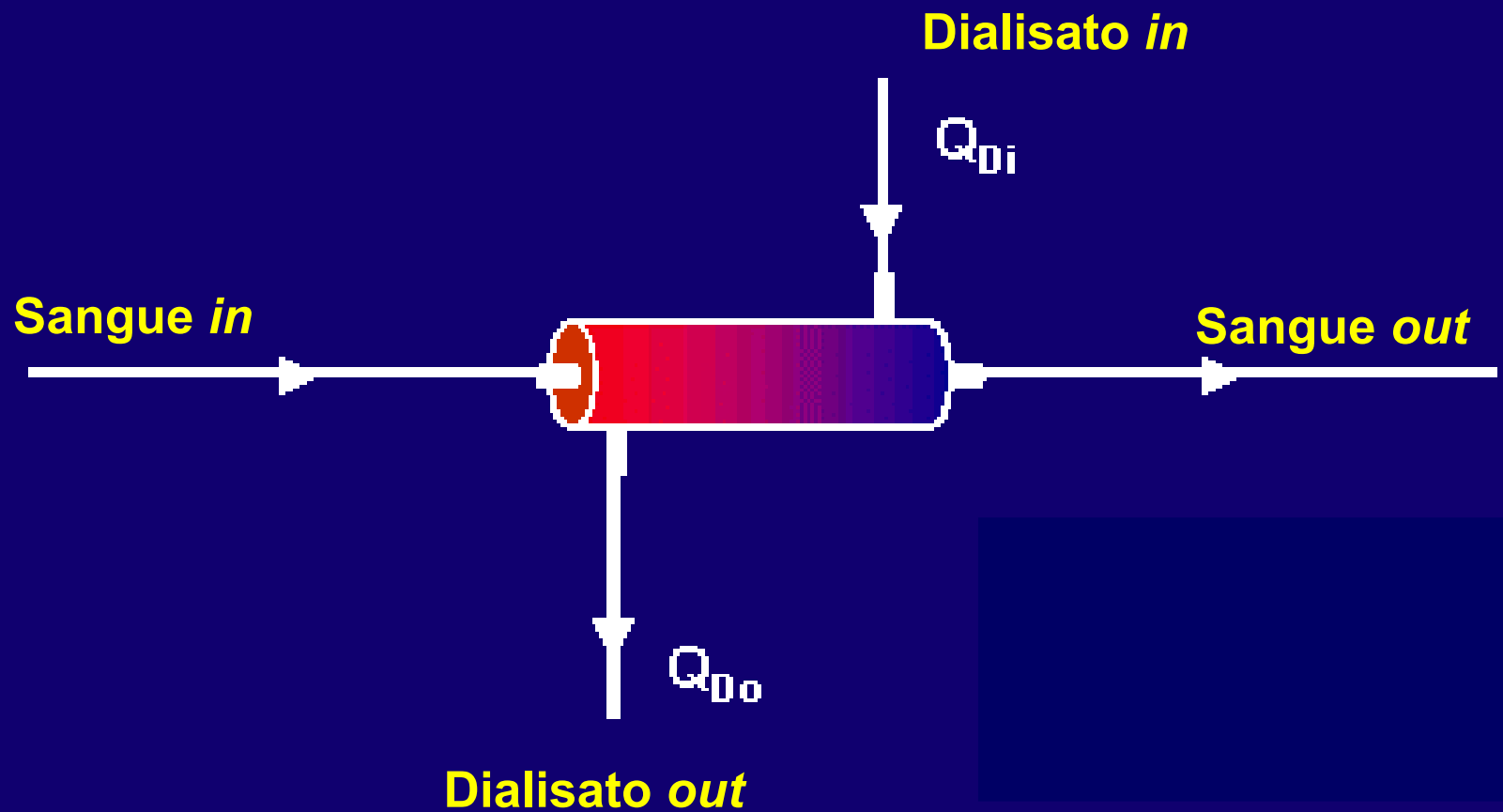
Adsorção

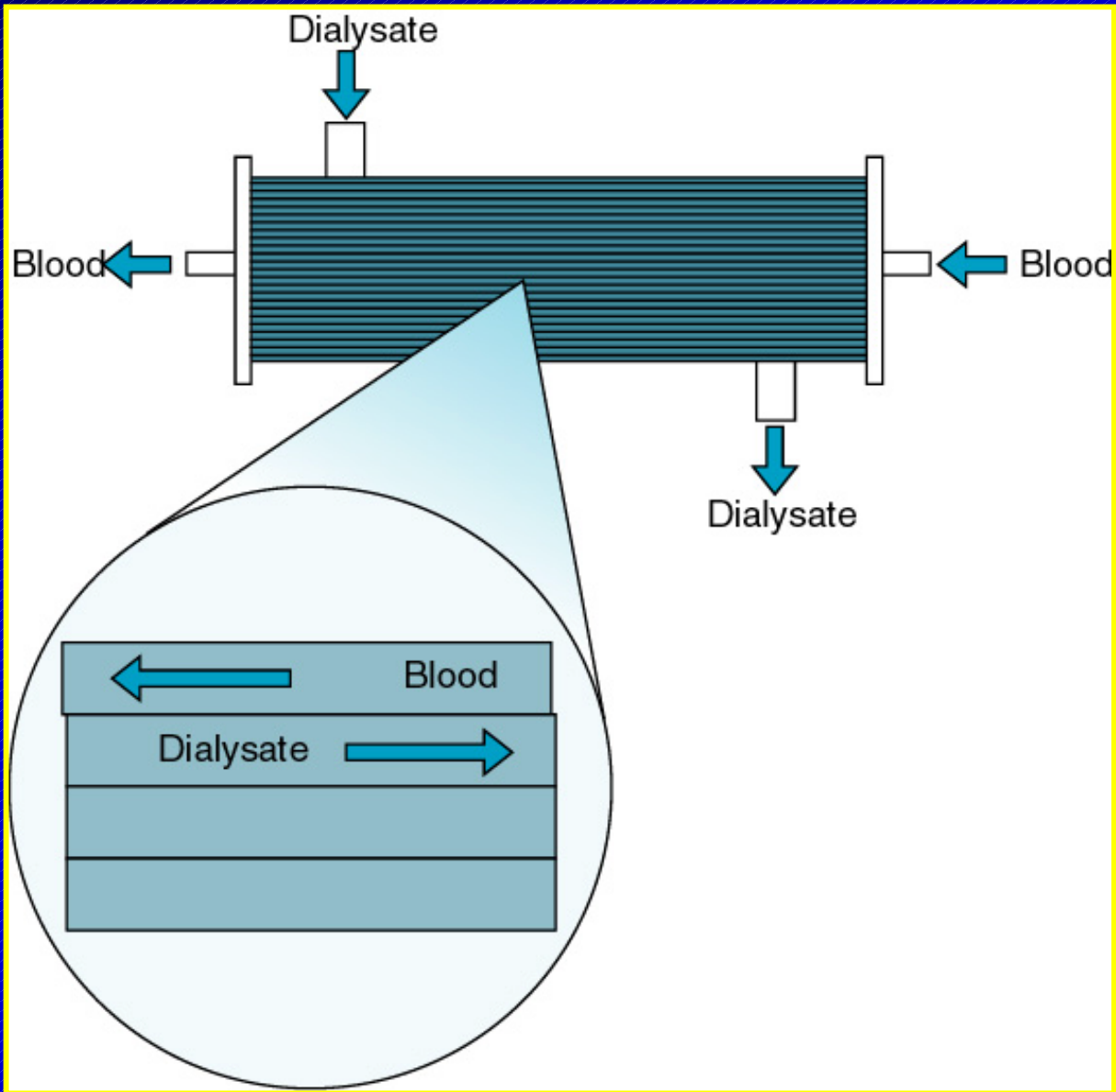


Afinidade da membrana

Dialisato

CRRT: Continuous Hemodialysis





Terapêutica Renal Substitutiva

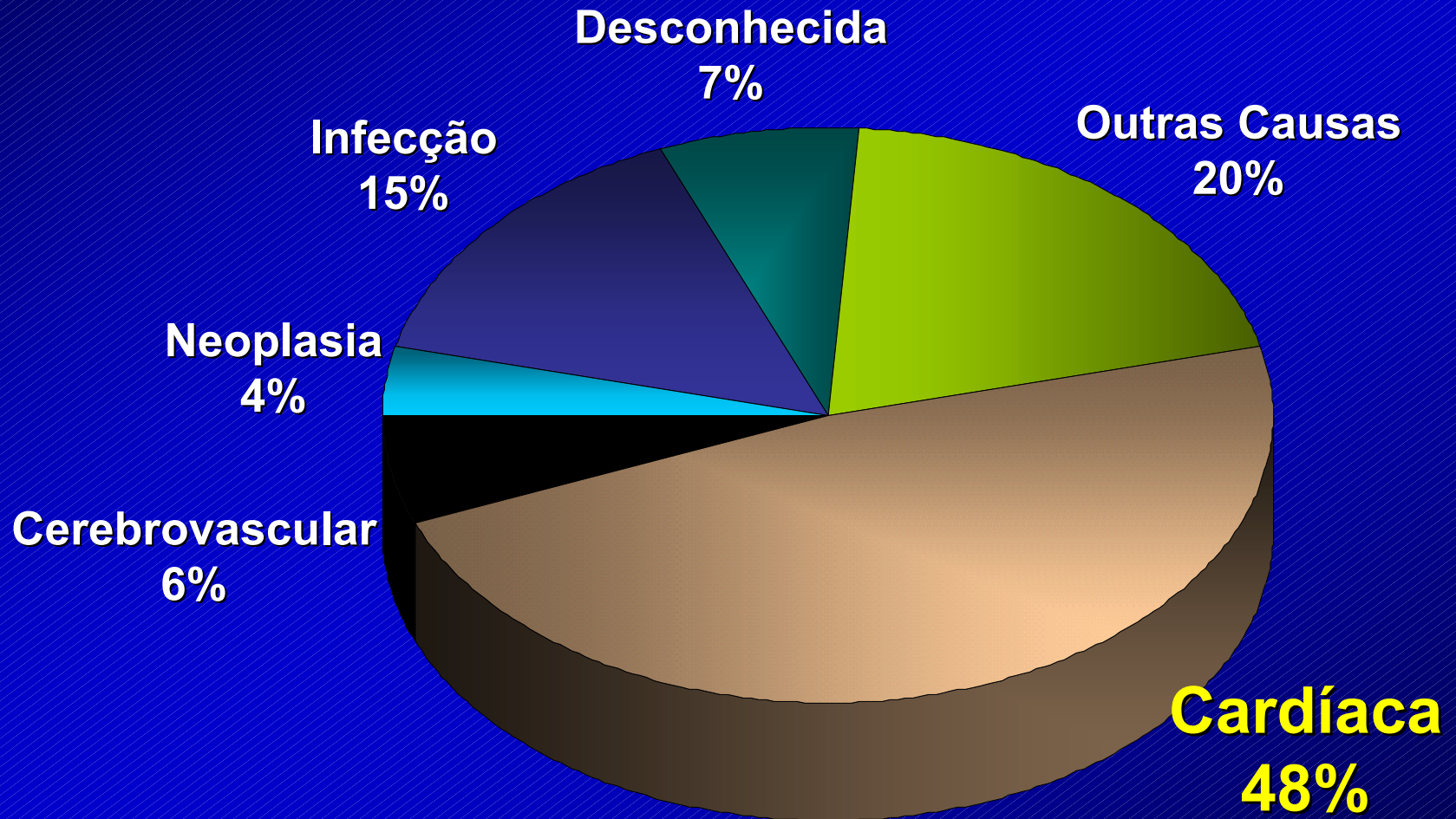
Impacto Econômico-Social

• Hemodiálise	(43.701)	1.104,00	639.138.506,02
• C.A.P.D.	(3.667)	1.713,42	74.831.111,14
• D.P.A.	(981)	2.213,43	2.171.374,83
• D.P.I.	(409)	1.110,00	453.990,00
• Acessos			6.862.662,09
• Calcitriol			13.310.257,99
• Eritropoetina			79.082.748,67
• Hidróxido de ferro EV			5.063.179,16
• Medicamentos outros			65.501.153,27
• Radiol/Lab.			52.765.483,55
• Total Diálise			R\$ 935.180.466,82

Mortalidade em Hemodiálise

- Japão 9,7%
- Chile 13,4%
- Europa 14,8%
- Uruguai 15,9%
- **Brasil 16,1%**
- Venezuela 21,1%
- Am. Latina 21,1%
- Argentina 21,3%
- **Estados Unidos 22,3%**
- África do Sul 25,9%

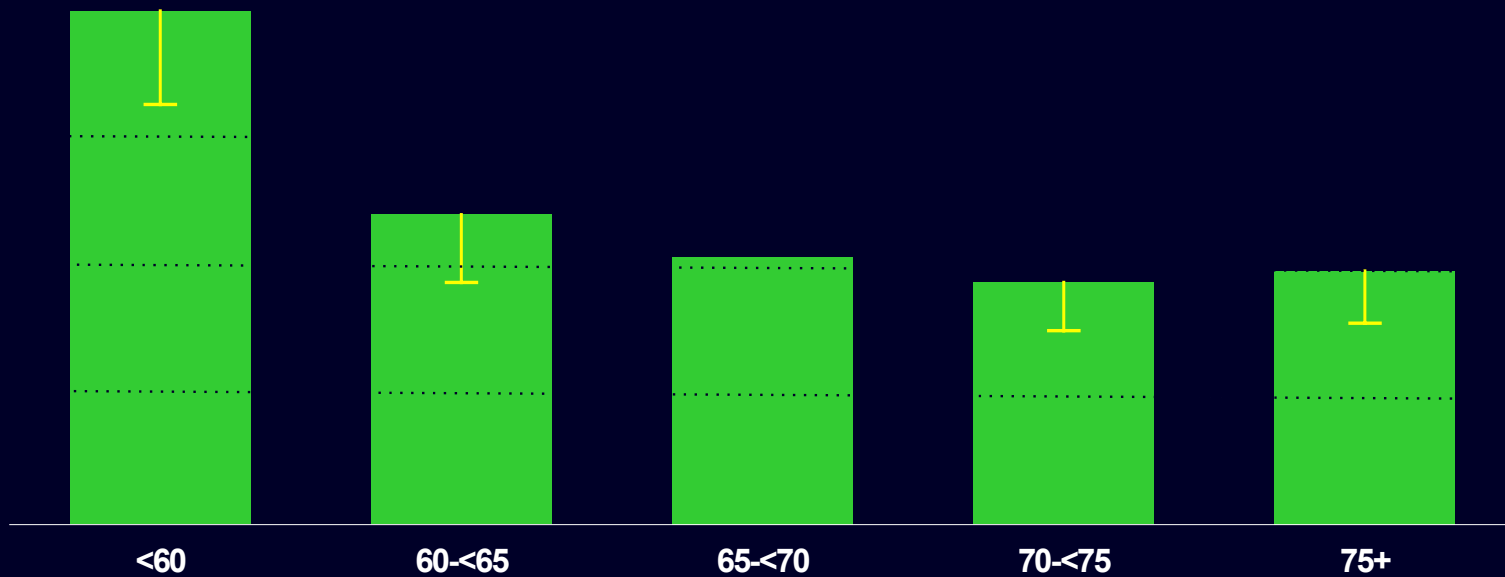
Causas de óbito em pacientes com IRC



USRDS, 1996

Risk of all-cause death, by URR

figure 8.23, incident hemodialysis patients, 1998, adjusted for age, gender, race, comorbidity, disease severity, & hct, stratified on diabetic status



Dose de Diálise

Clearance do dialisador

K t

Tempo de diálise

V

Volume de distribuição de uréia

1,2

Aspectos do monitoramento da diálise

- **Invasibilidade**
- **Frequência**
- **Acurácia**
- **Envolvimento tecnológico**
- **Custo**
- **Importância do parâmetro monitorado**

Parâmetros que poderiam ser monitorados continuamente

Paciente

Pressão arterial

Frequência cardíaca

Oximetria

Mudanças volume sanguíneo

Eletrólitos

pH

Balanço térmico e energético

Parâmetros que poderiam ser monitorados continuamente

Tratamento

Fluxo de sangue e dialisato

Recirculação

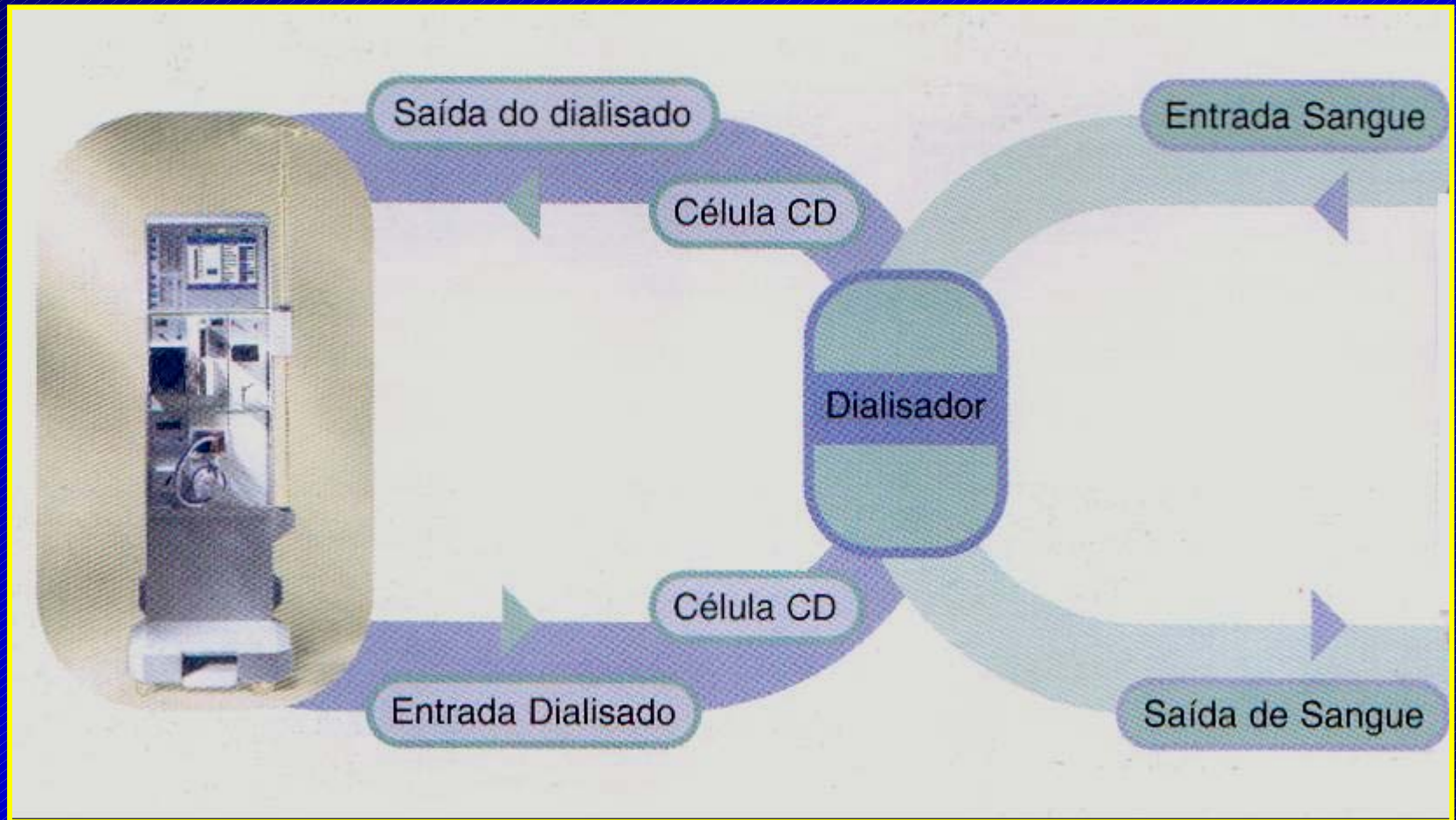
Controle de ultrafiltração

Composição do dialisato e temperatura

Volume de sangue dialisado

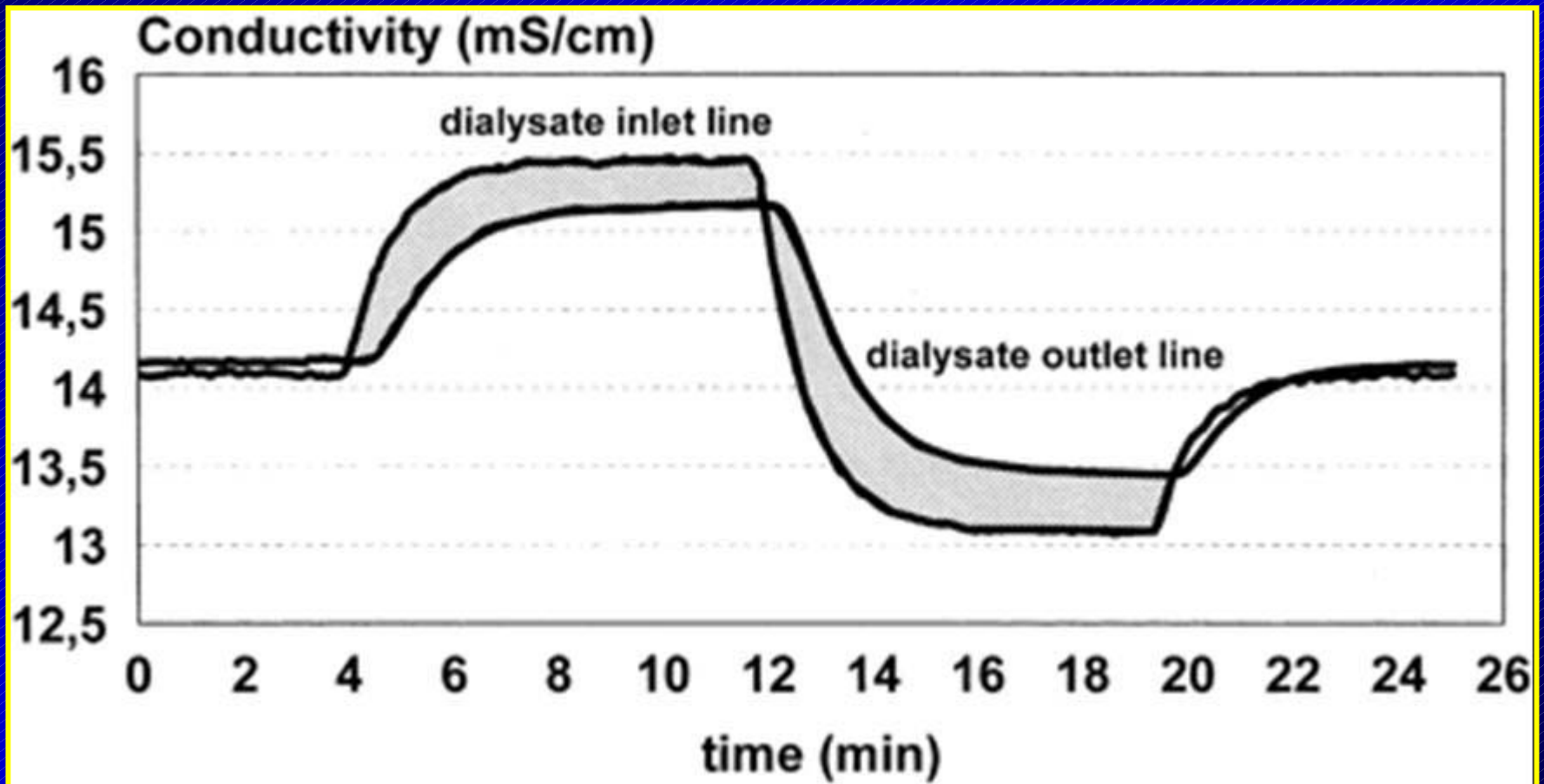
Eficiência da diálise (Kt/V)

Monitoramento da dose de diálise



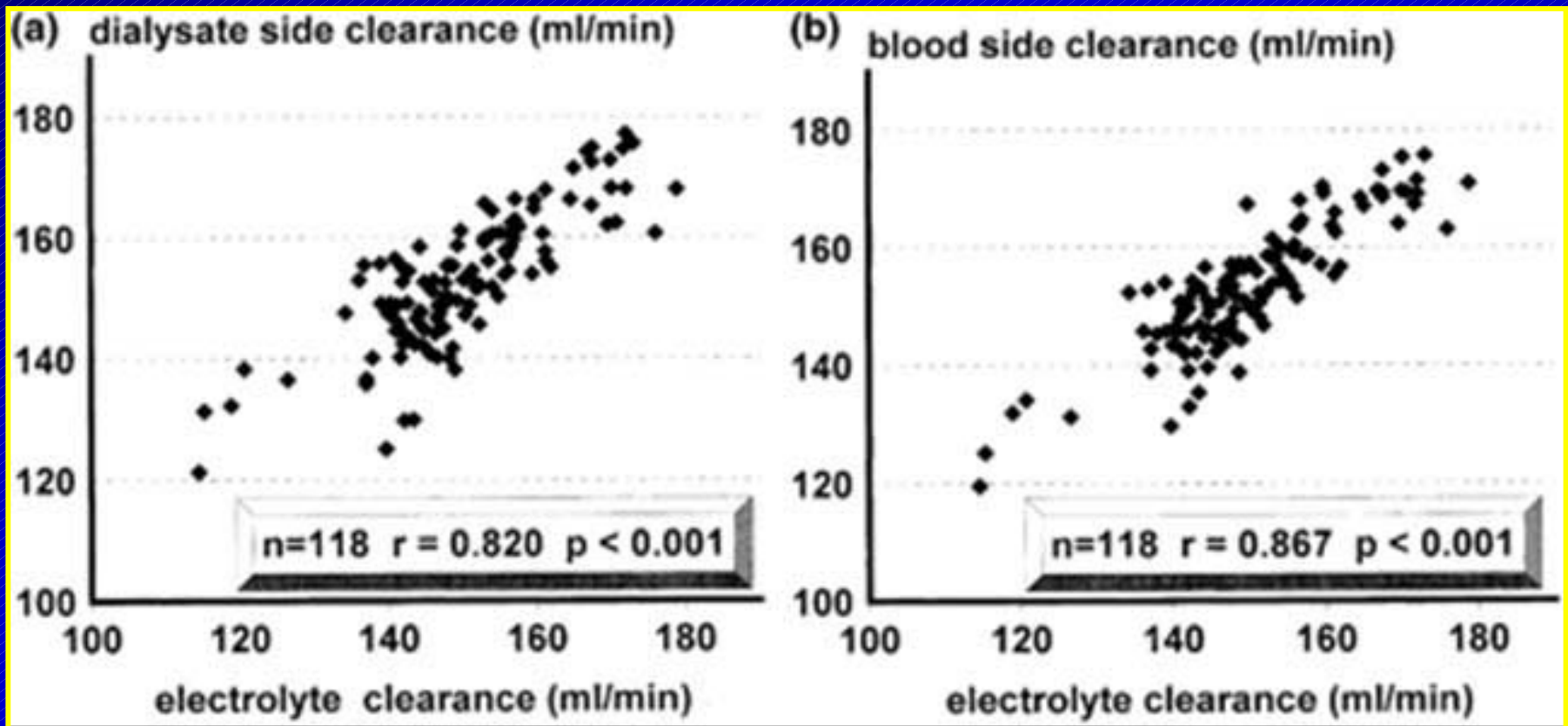
Monitoramento da dose de diálise

Condutividade eletrolítica

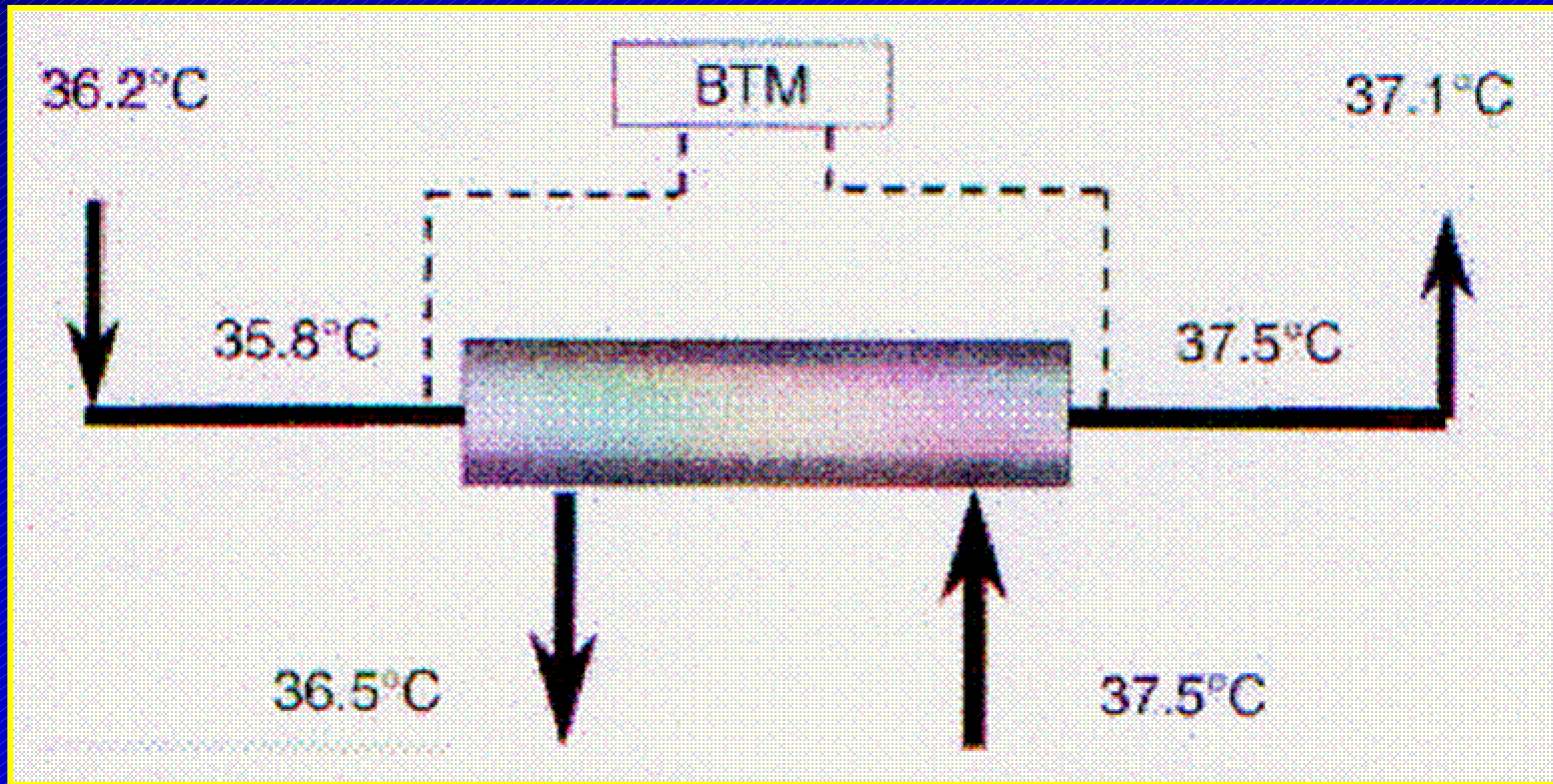


Monitoramento da dose de diálise

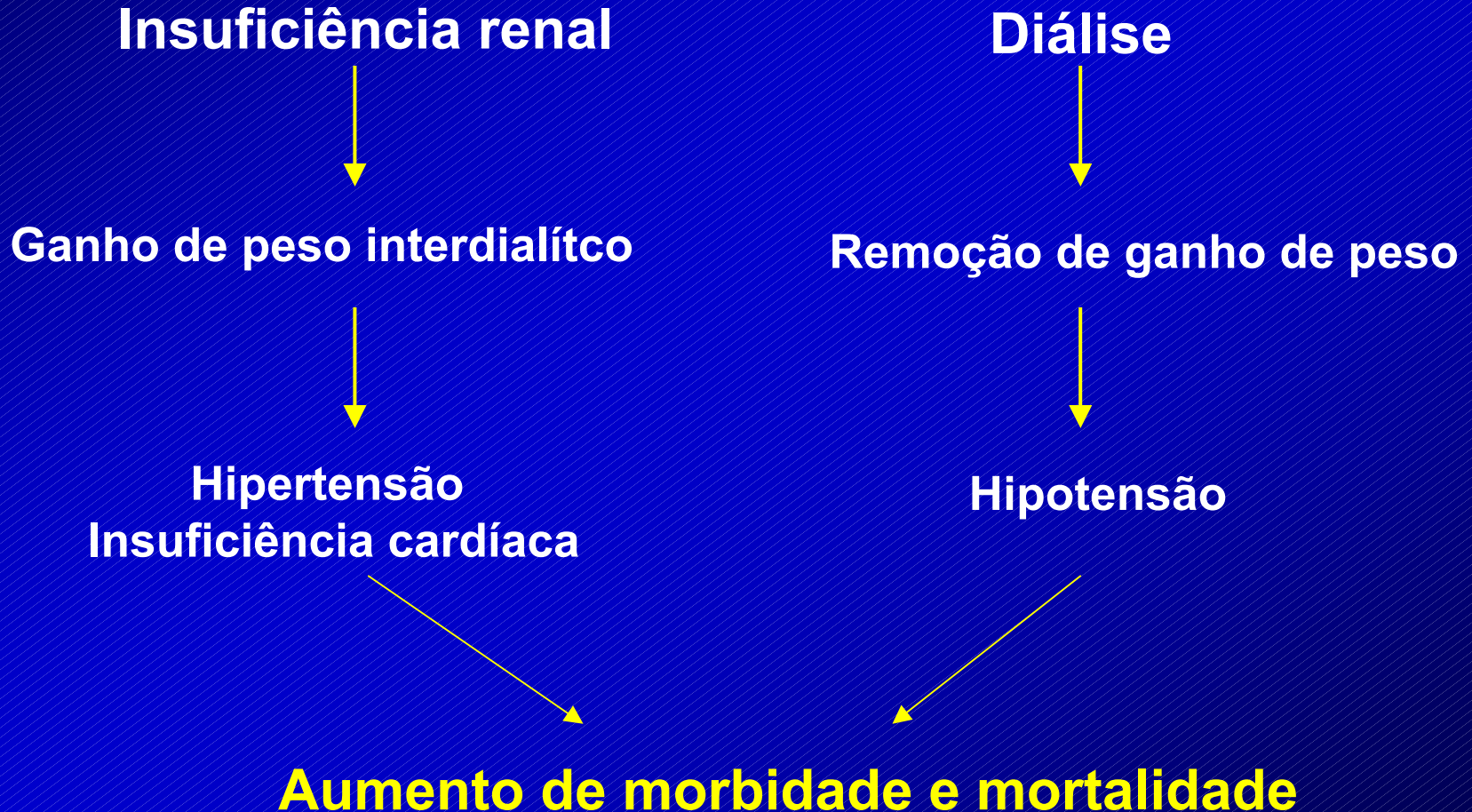
Condutividade eletrolítica



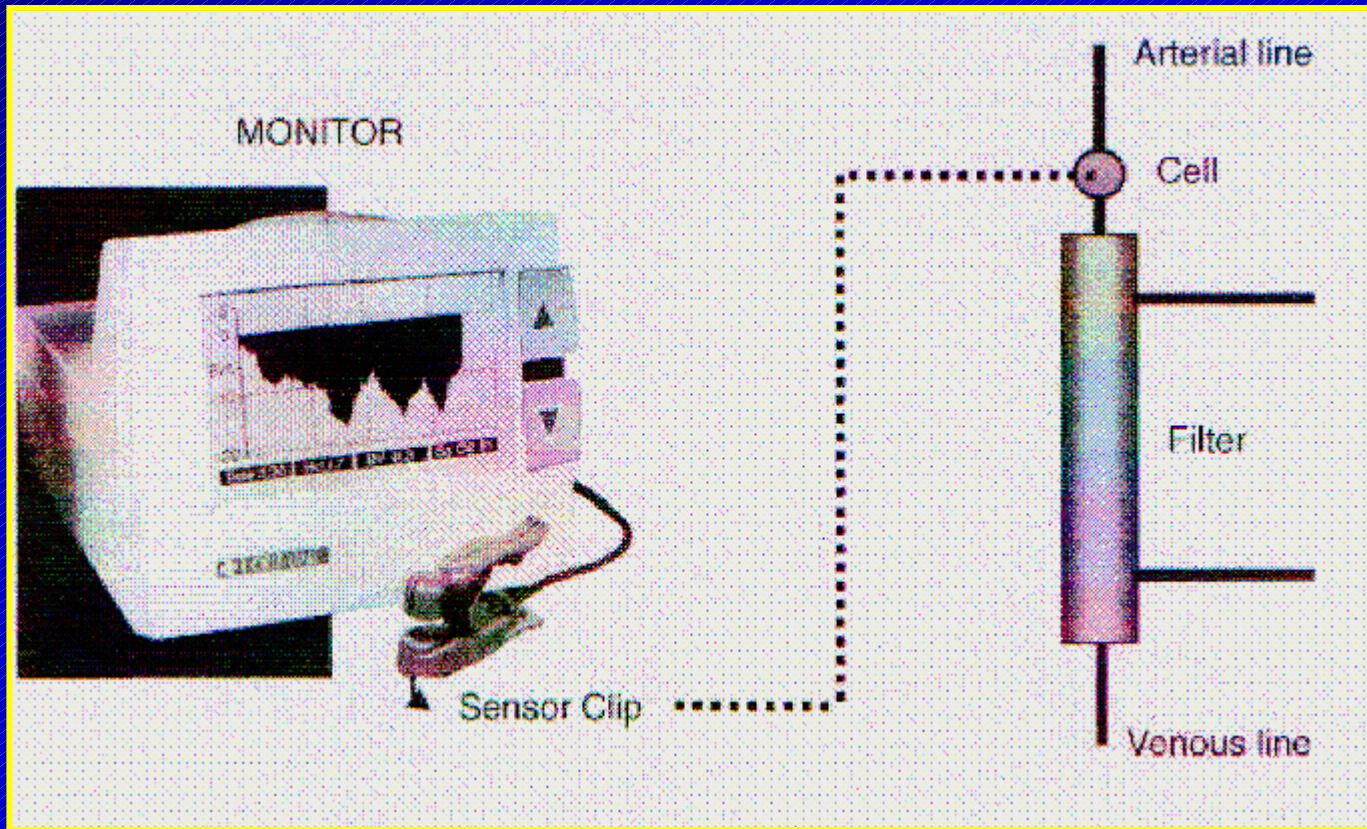
Sensores de temperatura



Sensores de volume sanguíneo



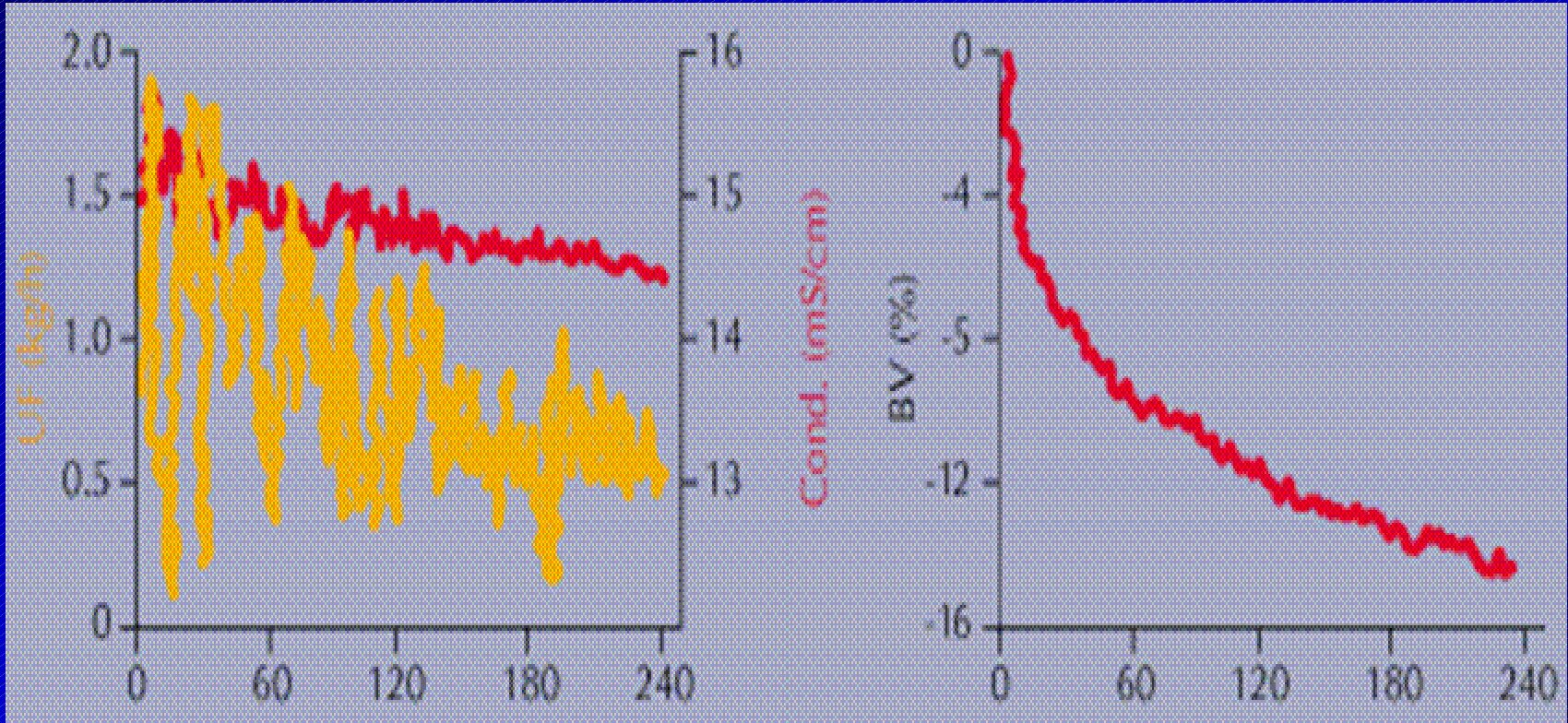
Sensores de volume sanguíneo



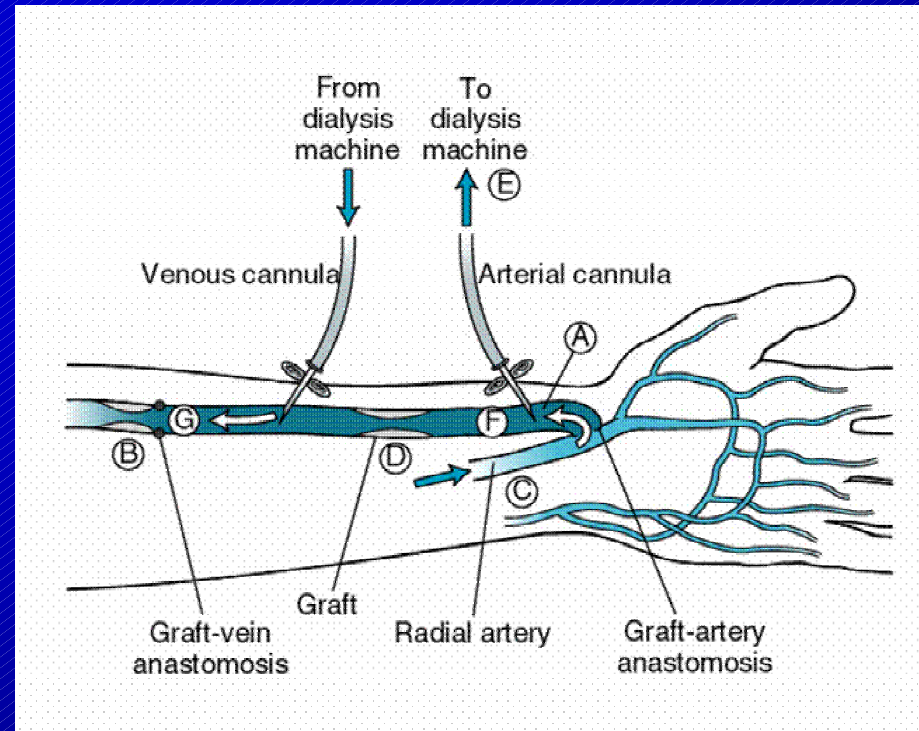
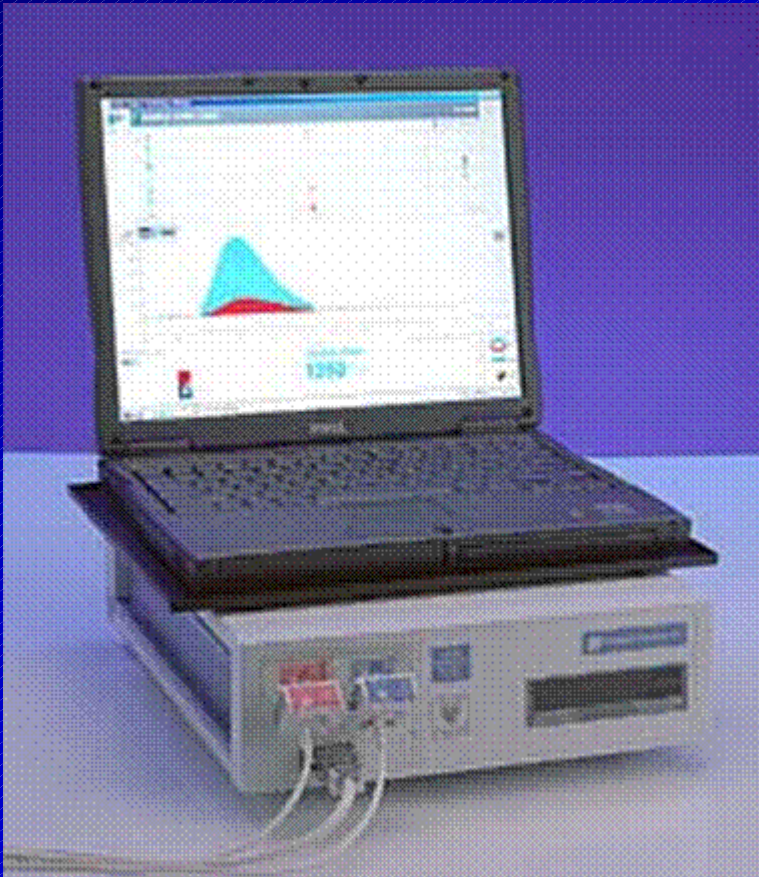
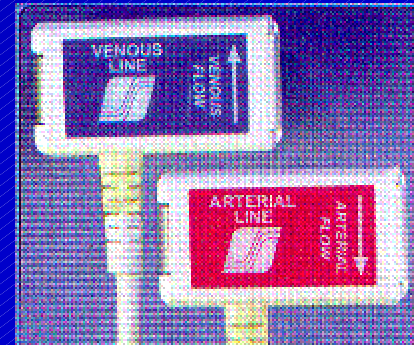
Sensores de volume sanguíneo



Sensores de volume sanguíneo



Sensores de débito cardíaco



Sensores de débito cardíaco

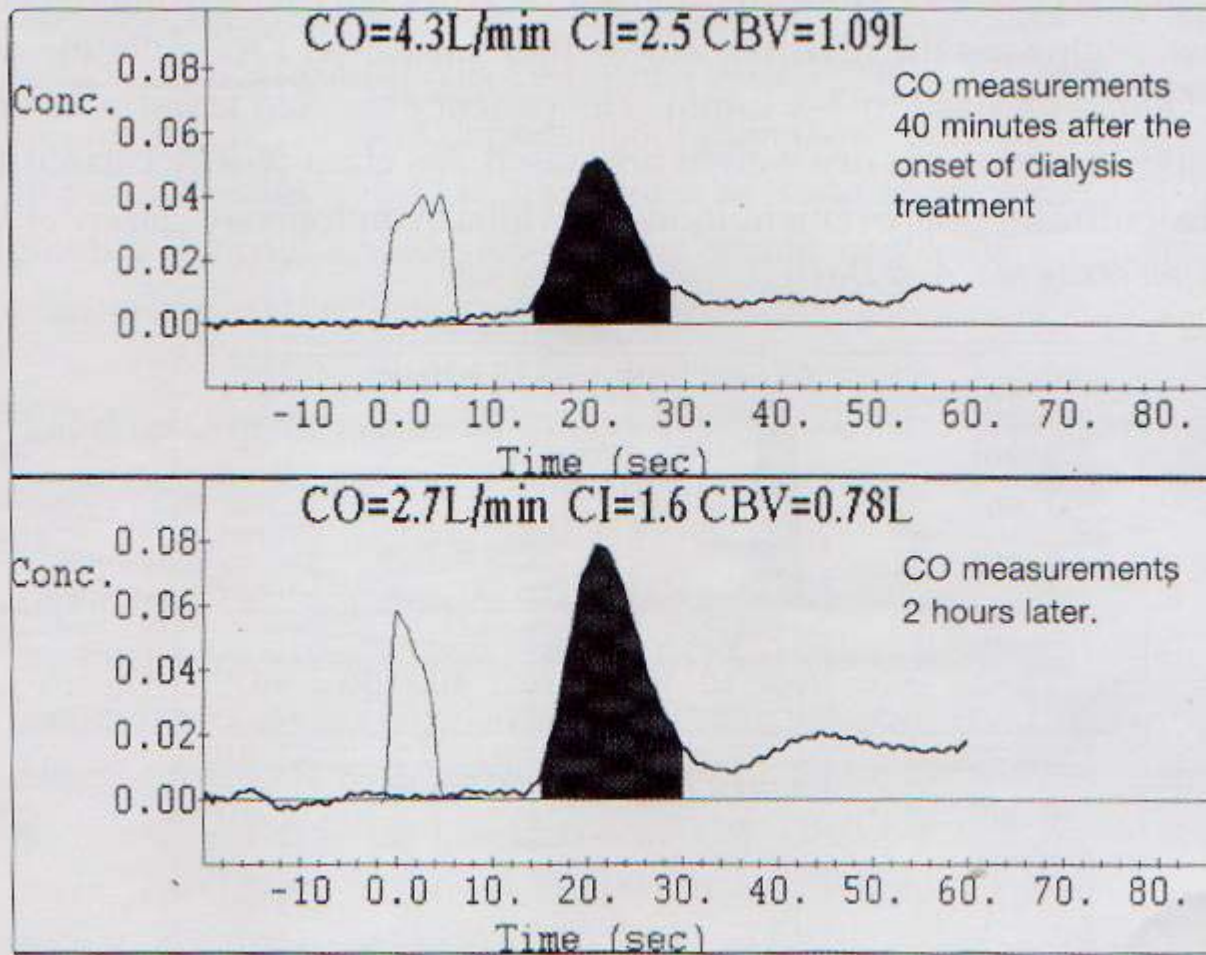


Fig. 3-2: Flow-QC screens showing deterioration of cardiac function during the course of the hemodialysis session.