

Dialysis of Drugs
Source Documents
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Note: Year indicates date of Dialysis of Drugs edition.

Abacavir

Izzedine H, et al. Pharmacokinetics of abacavir in HIV-1-infected patients with impaired renal function. *Nephron* 2001; 89:62-67. (2002)

Abatacept

Orencia prescribing information (2007)

Abiraterone acetate

Zytiga prescribing information (2012)

Acenocoumarol

Sintrom prescribing information (2005)

Acetylcysteine

Soldini D, et al. Pharmacokinetics of N-acetylcysteine following repeated intravenous infusion in haemodialysis patients. *Eur J Clin Pharmacol* 2005; 60:859-864. (2006)

Acid colloidal hydrocolloid

Flamigel package insert (2012)

Acitretin

Stuck AE, et al. Pharmacokinetics of acitretin and its 13-cis metabolite in patients on haemodialysis. *Br J Clin Pharmacol.* 1989; 27:301-4. (2004)

Aclidinium bromide

Tudorza PI (2013)

Adalimumab

Humira prescribing information (2005)

Adefovir

Hepsera prescribing information (2004)

Professional services information from company (2004)

Aflibercept

Eylea package information (2013)

Agalsidase alfa and beta (see galactosidase)

Replagal product information from FDA web site (2006)

Kosch M, et al. Enzyme replacement therapy administered during hemodialysis in patients with Fabry disease. *Kidney Int* 2004; 66:1279-1282. (2005)

Pastores GM, et al. Safety and pharmacokinetics of agalsidase alfa in patients with Fabry disease and end-stage renal disease. *Nephrol Dial Transplant* 2007; 22:1920-1925. (2008)

Fabrazyme prescribing information (2008)

Replagal product information from European web site (2008)

Agomelatine

Valdoxan PI (2012)

Albinterferon Alfa-2b

Serra DB, et al. Single-Dose Pharmacokinetics, Safety, and Tolerability of Albinterferon

Alfa-2b in Subjects with End-Stage Renal Disease on Hemodialysis Compared to Those in Matched Healthy Volunteers. *Antimicrob Agents Chemother.* 2011;55:473-7. (2012)

Alcaftadine
Lastacaft PI (2011)

Aldesleukin
Proleukin PI

Alefacept
Amevive prescribing information (no data) (2006)

Alfacalcidol

Alfentanil
Alfenta PI

Alemtuzumab
Campath PI (2004)

Alfuzosin
Uroxatral prescribing info (2011)

Alginic acid
Flaminal PI (2012)

Alglucerase
Ceredase PI

Alitretanoin
Toctino PI (Canada 2010, US 2011)

Alprostadiol
Unpublished manuscript reviewed by CJ. (2001)

Aluminum
Yue CS, et al. Aluminum toxicokinetics in peritoneal dialysis patients. *Clin Toxicol.* 2011;49:659-663. (2012)

Ambrisentan
Letairis prescribing information (2008)

Amikacin
Stass H, et al. Pharmacokinetics and tolerability of BAY41-6551 in subjects with chronic kidney disease. *J Aerosol Med Pulm Drug Deliv* 2011, 24, 191-9. (2012)
Luyt CE, et al. Pharmacokinetics and tolerability of amikacin administered as BAY41-6551 aerosol in mechanically ventilated patients with gram-negative pneumonia and acute renal failure. *J Aerosol Med Pulm Drug Deliv.* 2011 Aug;24(4):183-90. (2013)

Aminophylline
Included previously published data for theophylline.(2002)

Amiodarone
Micromedex drug evaluation (2010)

Amisulpride
Micromedex drug evaluation (2003)

Amlodipine
Kungys G, et al. Pharmacokinetics of amlodipine in hypertensive patients undergoing haemodialysis. *Eur J Clin Pharmacol.* 2003; 59:291-5. (2004)
Exforge HCT package insert (2012)
Sevikar PI (2012)
Twynsta PI (2012)

Amoxipine
Micromedex drug evaluation (2010)

Amphotericin B
Gussak HM, et al. Administration and clearance of amphotericin B during high-efficiency or high-efficiency/high-flux dialysis. *Am J Kidney Dis.* (in press). (2002)

Amphotericin B lipid complex
Abelcet package insert (2007)

Ampicillin/sulbactam
Blum RA, et al. Pharmacokinetics of ampicillin and sulbactam coadministered to subjects with normal and abnormal renal function and with end-stage renal disease on hemodialysis. *Antimicrob Agents Chemother* 1989, 33, 1470-6. (2013)

Amprenavir
Agenerase package insert (2000)

Amsacrine
Micromedex drug evaluation. (2002)

Anakinra
Kineret package insert. (2002)
Yang B-B, et al. Pharmacokinetics of anakinra in subjects with different levels of renal function. *Clin Pharmacol Ther.* 2003; 74:85-94. (2004)

Anidulafungin
Dowell JA, et al. Anidulafungin does not require dosage adjustment in subjects with varying degrees of hepatic or renal impairment. *J Clin Pharmacol* 2007; 47:461. (2008)
Eraxis prescribing information (2010)
Burkhardt O, et al. Extended daily dialysis does not affect the pharmacokinetics of anidulafungin. *Int J Antimicrob Agents.* 2009;34:282-283. (2011)

Anisindione
DrugDex drug evaluation (2003)

Apixaban
Eliquis PI (2013)

Apomorphine
Micromedex drug evaluation. (2002)
van der Geest R, et al. Pharmacokinetics, enantiomer interconversion, and metabolism of R-apomorphine in patients with idiopathic Parkinson's disease. *Clin Neuropharmacol* 1998; 21:159. (2005)

Aprepitant
Emend package insert (2004)
Bergman AJ, et al. Effect of impaired renal function and haemodialysis on the pharmacokinetics of aprepitant. *Clin Pharmacokinet* 2005; 44:637-647. (2006)

Ara (U)
See entry for cytosine arabinoside. (2013)

Argatroban
de Denus S, et al. Decreased argatroban clearance unaffected by hemodialysis in anasarca. *Ann Pharmacother* 2003; 37:1237. (2005)
Murray PT, et al. A prospective comparison of three argatroban treatment regimens during hemodialysis in end-stage renal disease. *Kidney Int* 2004; 66:2446-2453. (2006)

Aripiprazole

Abilify PI (2011)
Micromedex-Drugdex drug evaluation (2004)

Asenapine
Saphris PI (2011)

Arsenic trioxide
Fesmire FM, et al. Survival following massive arsenic ingestion. *Am J Emerg Med* 1988; 6:602-606. (2002)
Levin-Scherz JK, Acute arsenic ingestion. *Ann Emerg Med* 1987; 16:702-704. (2002)

Artemether
Micromedex-Drugdex drug evaluation (2004)

Ascorbic acid
Wang S, et al. Plasma ascorbic acid in patients undergoing chronic haemodialysis. *Eur J Clin Pharmacol.* 1999; 55:527-532. (2002)
Tsapas G, et al. Effect of peritoneal dialysis on plasma levels of ascorbic acid. *Nephron* 1983; 33:34-37. (2002)
Shah GM, et al. Ascorbic acid supplements in patients receiving chronic peritoneal dialysis. *Am J Kidney Dis.* 1991; 18:84-90. (2002)

Asparaginase Erwinia Chrysanthem
Erwinase package information (2013)

Astemizole
Delete from database due to product withdrawal. (2002)

Atazanavir
Reyataz prescribing information (2005)

Atomoxetine
Strattera prescribing information (2004)

Atorvastatin
Lins RL, et al. Pharmacokinetics of atorvastatin and its metabolites after single and multiple dosing in hypercholesterolaemic haemodialysis patients. *Nephrol Dial Transplant.* 2003; 18:967-76. (2004)
Lipitor prescribing information (2010)

Attapulgate
Micromedex drug evaluation. (2002)

Aurothioglucose
PDR entry for Solganal. (2002)

Avanafil
Stendra PI (2013)

Axitinib
Inlyta package information (2013)

Azacididine
Vidaza PI (2011)

Azelastine
Astelin product information from Micromedex. (2002)
Astelin information in PDR (2003)

Azilsartan medoxomil
Edarbi prescribing information (2012)

Azithromycin

Kent JR, et al. Azithromycin: an assessment of its pharmacokinetics and therapeutic potential in CAPD. *Perit Dial Int* 2001; 21:372-377. (2002)

Heintz BH, Matzke GR, Dager WE. Antimicrobial dosing concepts and recommendations for critically ill adult patients receiving continuous renal replacement therapy or intermittent hemodialysis. *Pharmacotherapy* 2009, 29: 562-77 (review) (2011)

Baclofen
 Brvar M, et al. Haemodialysis clearance of baclofen. *Eur J Clin Pharmacol* 2007; 63:1143-46. (2008)

Balsalazide
 Colazal package insert (2001)

Belimumab
 Benlysta prescribing information (2012)

Bendamustine
 Treanda prescribing information (2009)

Bendroflumethiazide
 Micromedex (2008)

Benserazide
 Micromedex drug evaluation. (2002)

Bepotastine besylate
 Bepreve PI (2011)

Beractant
 Survanta information in PDR (2003)
 Survanta prescribing information

Besifloxacin
 Besivance PI (2011)

Betaine (see cystadane) (2008)

Bevacizumab
 Avastin prescribing information (2005)
 Garnier-Viougat, et al. Pharmacokinetics of bevacizumab in haemodialysis. *Nephrol Dial Transplant* 2007; 22:975. (2008)

Bexarotene
 Targretin package insert (2001)

Bezafibrate
 Micromedex drug evaluation (2010)

Biapenem
 Nagashima S, et al. Pharmacokinetics of a parenteral carbapenem, biapenem, in patients with end-stage renal disease and influence of haemodialysis. *J Antimicrob Chemother* 2000; 46:839-842. (2002)

Bimatoprost
 Lumigan PI (2011)

Bisoprolol
 PDR entry for Zebeta. (2002)

Bivalirudin
 Angiomax package insert. (2002)

Boceprevir
 Victrelis prescribing information (2012)

Bortezomib

Leal TB, et al. Dose-escalating and pharmacological study of bortezomib in adult cancer patients with impaired renal function: a National Cancer Institute Organ Dysfunction Working Group Study. *Cancer Chemother Pharmacol* 2011, DOI 10.1007/s00280-011-1637-5 (2012)

Bosentan

Tracleer package insert. (2002)

Liefeldt L, et al. Treatment of secondary pulmonary hypertension with bosentan and its pharmacokinetic monitoring in ESRD. *Am J Kidney Dis* 2004; 43:923. (2005)

Brentuximab vedotin

Adcetris prescribing information (2012)

Brinzolamide

Azarca prescribing information. (2012)

Bromfenac

Micromedex drug evaluation (2010)

Budesonide

Pulmicort package insert. (2002)

Bumetanide

Micromedex (2008)

Bupivacaine

Micromedex (2004)

Buprenorphine

Micromedex drug evaluation (2003)

Bupropion

Worrall SP, et al. Pharmacokinetics of bupropion and its metabolites in haemodialysis patients who smoke. *Nephron Clin Prac* 2004; 97:c83-c89. (2005)

Busulfan

Stein J, et al. Accidental busulfan overdose: enhanced drug clearance with hemodialysis in a child with Wiskott-Aldrich syndrome. *Bone Marrow Transplant* 2001; 27:551-553. (2002)

Ullery LL, et al. Busulfan clearance in renal failure and hemodialysis. *Bone Marrow Transplantation* 2000; 25:201-203. (2001)

Butoconazole

Gynazole-1 prescribing information (2008)

Clesterase inhibitor (human)

Berinert prescribing information. (2012)

Cabazitaxel

Jevtana PI (2011)

Caffeine

Cafnea package insert (2012)

Calcitonin

Miacalcin package insert (2001)

Calcitriol

Ash SR, et al. Lack of removal of calcitriol during hemodialysis procedures. *J Am Soc Nephrol* 1997; 8:1587-91. (2001)

Calcium polystyrene sulfonate

Martindale (Micromedex) (2002)

Calcium sodium alginate
Flaminal PI (2012)

CaNa₂EDTA/lead
Roberts DM, et al. Lead mobilization study and the clearance of intravenous CaNa₂EDTA in a patient with end-stage renal failure on hemodialysis. *J Clin Pharmacol* 2012, 52, 110-3. (2013)

Canakinumab
Ilaris prescribing information (2010)

Candesartan
Pfister M, et al. Pharmacokinetics and haemodynamics of candesartan cilexetil in hypertensive patients on regular haemodialysis. *Br J Clin Pharmacol*. 1999; 47:645-51. (2001)

Carbamazepine
Schuerer DJE, et al. High-efficiency dialysis for carbamazepine overdose. *Clin Toxicol* 2000; 38:321. (2007)
Koh KH, et al. High-flux haemodialysis treatment as treatment for carbamazepine intoxication. *Med J Malaysia* 2006; 61:109. (2007)
Prabaker MR, et al. Successful treatment of carbamazepine poisoning with hemodialysis: a case report and review of the literature. *Hemodial Int* 2011, 15, 407-11. (2013)
Harder JL, et al. Carbamazepine and the active epoxide metabolite are effectively cleared by hemodialysis followed by continuous venovenous hemodialysis in an acute overdose. *Hemodial Int* 2011, 15, 412-15. (2013)

Carbimazole
Used data previously published for methimazole. (2002)

Carboplatin
Heijns JB, et al. Continuous ambulatory peritoneal dialysis: pharmacokinetics and clinical outcome of paclitaxel and carboplatin treatment. *Cancer Chemother Pharmacol*. Jan 19, 2008 e-pub. (2009)
Oguri T, et al. Pharmacokinetic analysis of carboplatin in patients with cancer who are undergoing hemodialysis. *Cancer Chemother Pharmacol* 2010, 66, 813-7. (2012)
Hiraike M, et al. Pharmacokinetics of carboplatin in a hemodialysis patient with small-cell lung cancer. *Cancer Chemother Pharmacol* 2012, 69, 845-8. (2013)

Carfilzomib
Kyprolis PI (2013)

Carglumic acid
Carbaglu PI (2011)

Carnitine
Now referred to as levocarnitine in database. (2002)

Carprofen
Micromedex drug evaluation (2010)

Carvedilol
Coreg prescribing information (2010)

Caspofungin
Candidas package insert. (2002)

Cefazolin

- Sowinski KM, et al. Cefazolin dialytic clearance by high-efficiency and high-flux hemodialyzers. *Am J Kidney Dis* 2001; 37:766-776. (2002)
- Maynor LM, et al. An in vivo-in vitro study of cefepime and cefazolin dialytic clearance during high-flux hemodialysis. *Pharmacotherapy* 2008; 28:977-983. (2010)
- Cefdinir
Hishida A, et al. Pharmacokinetic study of an oral cephalosporin, cefdinir, in hemodialysis patients. *Antimicrob Agents Chemother.* 1998; 42:1718-1724. (2001)
- Cefditoren
Spectracef package insert. (2002)
ICAAC abstract (2000)- unpublished, but provided by manufacturer (2002)
- Cefepime
Schmaldienst S, et al. Multiple-dose pharmacokinetics of cefepime in long-term hemodialysis with high-flux membranes. *Eur J Clin Pharmacol.* 2000; 56:61-64. (2001)
Maynor LM, et al. An in vivo-in vitro study of cefepime and cefazolin dialytic clearance during high-flux hemodialysis. *Pharmacotherapy* 2008; 28:977-983. (2010)
- Ceftaroline fosamil
Teflaro prescribing information (2012)
- Ceftazidime
Kim K, Hwang YH, Ro H, et al. Pharmacokinetic profiles of ceftazidime after intravenous administration in patients undergoing automated peritoneal dialysis. *Antimicrob Agents Chemother.* 2011;55:2523-7. Epub 2011 Mar 14. (2012, no change)
- Celecoxib
Celebrex prescribing information (2010)
- Cerivastatin
Delete from database due to product withdrawal. (2002)
- Certolizumab
Cimzia prescribing information (2009)
- Cetirizine
Noiri E, et al. Pharmacokinetics of cetirizine in chronic hemodialysis patients: a multiple-dose study. *Nephron* 2001; 89:101-104. (2002)
- Cetuximab
Erbitux package insert (2005)
Inauen R, et al. Feasibility of using cetuximab and bevacizumab in a patient with colorectal cancer and terminal renal failure. *Oncology* 2007; 72:209-210. (2010)
- Chlormethine (see mechlorethamine) (2008)
- Chloral hydrate
Stalker NE, et al. Acute massive chloral hydrate intoxication treated with hemodialysis: a clinical pharmacokinetic analysis. *J Clin Pharmacol* 1978; 18:136. (2005)
Buur T, et al. Pharmacokinetics of chloral hydrate poisoning treated with hemodialysis and hemoperfusion. *Acta Med Scand* 1988; 223:269-74. (2005)
- Chlordiazepoxide
Micromedex drug evaluation (2010)
- Chlorothiazide
Micromedex drug evaluation. (2002)
- Chlorpromazine
Micromedex drug evaluation (2010)

Cholestyramine
Micromedex drug evaluation (2001)

Choline theophyllinate
Used data previously published for theophylline. (2002)

Choriogonadotropin
Novarel package insert. (2008)

Ciclesonide
Micromedex drug evaluation (2006)

Cilostazol
Pletal prescribing information (2011)

Cinacalcet
Sensipar prescribing information (2005)
Padhi D. Study abstract supplied by Amgen (2005)
Padhi D, et al. No effect of renal function or dialysis on pharmacokinetics of cinacalcet (Sensipar/Mimpara). Clin Pharmacokinet 2005; 44:509-516. (2006)

Ciprofloxacin
Yeung SM, et al. Pharmacokinetics of oral ciprofloxacin in continuous cycling peritoneal dialysis. Perit Dial Int 2004; 24:447-453. (2006)

Cisapride
Micromedex drug evaluation (2010)

Cisplatin
Hirai K, et al. Kinetics of plasma platinum in a hemodialysis patient receiving repeated doses of cisplatin. Oncol Rep. 2000; 7:1243-5. (2003)
Rebibou JM, et al. Combined chemotherapy and radiotherapy for esophageal carcinoma in a hemodialyzed patient. Nephron 1996; 74:611-612. (2003)
Tomita M, et al. Pharmacokinetics of paclitaxel and cisplatin in a hemodialysis patient with recurrent ovarian cancer. Anti-Cancer Drugs 2001; 12:485-487. (2003)
Watanabe R, et al. Feasibility of combination chemotherapy with cisplatin and etoposide for haemodialysis patients with lung cancer. Br J Cancer. 2003; 88:25-30. (2004)
Sebestyan J, et al. Cisplatin pharmacokinetics in a child receiving peritoneal dialysis. Pediatr Nephrol 2010, 25: 1185-9. (2011)
Matsumoto K. Pharmacokinetics of cisplatin and methotrexate after M-VAC chemotherapy for advanced urothelial cancer in hemodialysis patients. In J Urol 2008, 15, 949-50. (2011)
Marnitz S, et al. Simultaneous chemoradiation in a patient with recurrent cervical cancer undergoing hemodialysis. Strahlentherapie und Onkologie 2011, 187, 831-4. (2013)
Pouliquen A-L, et al. Optimizsticular cancer patient with acute renal failure. J Incol Pharm Pract 2009, 17, 265-9. (2013)

Citalopram
Spigset O, et al. Citalopram pharmacokinetics in patients with chronic renal failure and the effect of haemodialysis. Eur J Clin Pharmacol 2000; 56:699-703. (2002)

Citric acid
Prepopik PI (2013)

Clavulanic acid
Augmentin prescribing information (2002)

Watson ID, et al. Pharmacokinetics of clavulanic acid-potentiated ticarcillin in renal failure. *Ther Drug Mon* 1987; 9:139-47. (2002)

Clemastine
Micromedex drug evaluation (2010)

Clevidipine
Cleviprex prescribing information (2009)

Clinafloxacin
Randinitis EJ, et al. Clinafloxacin pharmacokinetics in subjects with various degrees of renal function. *Antimicrob Agents Chemother* 2001; 45:2536-2542. (2002)

Clobazam
Roberts GW. Clobazam and N-desmethyclobazam serum concentrations in endstage renal failure and hemodialysis. *Ann Pharmacother* 1994; 28:966-7. (2004)
Onfi package information (2013)

Clodronate
Ala-Houhala I, et al. Pharmacokinetics of clodronate in haemodialysis patients. *Nephrol Dial Transplant*. 1999; 14:699-705. (2001)

Clofarabine
Listed in *Dialysis of Drugs US 2010*. Clolar package insert. (2011)

Clofibrate
Micromedex drug evaluation (2010)

Clomiphene
Clomiphene citrate package insert. (2002)

Clomipramine
Micromedex drug evaluation (2010)

Clotrimazole
Micromedex drug evaluation (2001)

Clozapine
Clozaril prescribing information (2010)
Jacob A. Therapeutic drug monitoring of clozapine in a hemodialyzed smoking patient with schizophrenia. *Ther Drug Monit* 2009, 31, 281-2. (2011)

Codeine
Molanaei H. Influence of the CYP2D6 polymorphism and hemodialysis on codeine disposition in patients with end-stage renal disease. *Eur J Clin Pharmacol* 2010, 66, 269-73. (2011)

Colaspase
Leunase package insert (MIMS) (2002)

Colesevelam
Welchol package insert (2001)

Colestipol
PDR entry for Colestid. (2002)

Colfosceril
Micromedex drug evaluation (2003)

Colistin
The Use of Antibiotics (4th ed) Kucers & Bennett

Collagenase *Clostridium histolyticum*
Xiaflex PI (2011)

Conivaptan
Vaprisol prescribing information (2007)

Corifollitropin
Elonva package insert (2012)

Crizotinib
Xalkori PI (2013)

Cromolyn sodium
Micromedex (2007)

Cyanocobalamin (see hydroxocobalamin)

Cyclobenzaprine
Flexeril package insert (2001)

Cyclophosphamide
Galletti PM, et al. Hemodialysis in cancer chemotherapy. *Trans ASAIO*. 1996; 12:20. (2003)
McCune JS, et al. Cyclophosphamide disposition in an anephric child. *Pediatr Blood Cancer* 2006; 46:99-104. (2007)

Cycloserine
Malone RS, et al. The effect of hemodialysis on cycloserine, ethionamide, para-aminosalicylate, and clofazimine. *Chest* 1999; 116:984-990. (2001)

Cyclosporine
Neoral prescribing information (2010)

Cysteamine
Besouw M, et al. Pharmacokinetics of cysteamine in a cystinosis patient treated with hemodialysis. *Pediatr Nephrol* 2011, 26, 639-40 (2012)

Cytosine arabinoside (cytarabine)
Poschl JMB, et al. Chemotherapy with cytosine arabinoside in a child with Burkitt's lymphoma on maintenance hemodialysis and hemofiltration. *Ann Hematol*. 1993; 67:37-39. (2002)
Radeski D, et al. Effective clearance of Ara-U the major metabolite of cytosine arabinoside (Ara-C) by hemodialysis in a patient with lymphoma and end-stage renal failure. *Cancer Chemother Pharmacol*. 2011 Apr;67(4):765-8. (2013)

Dabigatran
Stangier J, et al. Influence of renal impairment on the pharmacokinetics and pharmacodynamics of oral dabigatran etexilate: an open-label, parallel-group, single-centre study. *Clin Pharmacokinet* 2011, 49, 259-68. (2011)

Dalbavancin
Marbury T, et al. Pharmacokinetics of dalbavancin in patients with renal or hepatic impairment. *J Clin Pharmacol* 2009; 49:465-476. (2010)

Dalfampridine
Ampyra PI

Dalteparin
Schmid P, et al. Prospective observational cohort study of bioaccumulation of dalteparin at a prophylactic dose in patients with peritoneal dialysis. *J Thromb Haemost* 2010, 8, 850-2. (2011)

Dapsone

Neuvonen PJ, et al. Acute dapsone intoxication: clinical findings and effect of oral charcoal and haemodialysis on dapsone elimination. *Acta Med Scand* 1983; 214:215-20. (2006)

Daptomycin

Cubicin package insert (2010)

Heintz BH, Matzke GR, Dager WE. Antimicrobial dosing concepts and recommendations for critically ill adult patients receiving continuous renal replacement therapy or intermittent hemodialysis. *Pharmacotherapy* 2009, 29: 562-77 (review) (2011)

Salama NN, et al. Intradialytic administration of daptomycin in end-stage renal disease patients on hemodialysis. *Clin J Am Soc Nephrol* 2009, 4, 1190-4. (2011)

Salama NN, et al. Single-dose daptomycin pharmacokinetics in chronic haemodialysis patients. *Nephrol Dial Transplant* 2010, 25, 1279-84. (2011)

Khadzhynov D, et al. Plasma and peritoneal dialysate levels during daptomycin therapy for peritonitis. *Am J Kidney Dis* 2009, 53, 911-2. (2011)

Goedecke VA, et al. Pharmacokinetics and dialysate levels of daptomycin given intravenously in a peritoneal dialysis patient. *Scand J Inf Dis.* 2009;41:155-157.(2011)

Cardone KE, et al. Pharmacokinetics and pharmacodynamics of intravenous daptomycin during continuous ambulatory peritoneal dialysis. *Clin J Am Soc Nephrol* 2011, 6, 1081-88 (2012)

Patel N, et al. Use of pharmacokinetic and pharmacodynamic principles to determine optimal administration of daptomycin in patients receiving standardized trice-weekly hemodialysis. *Antimicrob Agents Chemother* 2011, 55, 1677-83. (2012)

Benziger DP, et al. Pharmacokinetics and safety of multiple doses of daptomycin 6 mg/kg in noninfected adults undergoing hemodialysis or continuous ambulatory peritoneal dialysis. *Clin Nephrol.* 2011;75:63-69.

Darbepoetin

McMahon LP, et al. Effects of different dialysis membranes on serum concentration of epoetin alfa, darbepoetin alfa, enoxaparin, and iron sucrose during dialysis. *Am J Kidney Dis* 2004; 44:509-516. (2006)

Kawakami K, et al. Population pharmacokinetics of darbepoetin alpha in peritoneal dialysis and non-dialysis patients with chronic kidney disease after single subcutaneous administration. *Eur J Clin Pharmacol* 2009, 65, 169-78. (2011)

Darifenacin

Enablex prescribing information (2008)

Darifenacin

Enablex package insert (2006)

Darunavir

Prezista prescribing information (2007)

Giguere P, et al. Pharmacokinetics of darunavir, etravirine, and raltegravir in an HIV-infected patient on haemodialysis. *AIDS* 2009; 23: 740-2. (2011)

Dasatinib

Sprycel prescribing information (2007)

Deferiprone

Ferriprox prescribing information (2013)

Deferasirox

Exjade prescribing information (2007)

Degarelix
Firmagon prescribing information (2010)
Firmagon package insert 2012

Denileukin
Ontak prescribing information (2009)

Denosumab
Prolia PI (2011)

Desirudin
Used data previously published for hirudin. (2002)

Desloratadine
Used data previously published for loratadine (a metabolite of loratadine). (2002)

Desogestrel
2001 AHFS. (2002)
Mircette prescribing information (2008)

Desvenlafaxine
Pristiq prescribing information (2009)
Nichols AI, et al. The pharmacokinetics and safety of desvenlafaxine in subjects with chronic renal impairment. *Int J Clin Pharmacol Ther.* 2011;49:3-13. (2012, no change)

Dexchlorpheniramine
Used data previously published for chlorpheniramine. (2002)

Dexlansoprazole
Dexilant PI (2011)

Dexmedetomidine
Precedex package insert. (2001)

Dextran 40, 70, 75
2001 AHFS. (2002)

Didanosine
Knupp CA, et al. Disposition of didanosine in HIV-seropositive patients with normal renal function or chronic renal failure: Influence of hemodialysis and continuous ambulatory peritoneal dialysis. *Clin Pharmacol Ther.* 1996; 60:535-42. (2003)
Singlas E, et al. Didanosine pharmacokinetics in patients with normal and impaired renal function: Influence of hemodialysis. *Antimicrob Agents Chemother.* 1992; 36:1519-24. (2003)

Diethylstilbesterol
Hatori M, et al. The pharmacokinetics of fosfestrol and diethylstilbesterol in chronic hemodialysis patients with prostate cancer. *Int J Urol.* 2001; 8:681-5. (2003)

Digoxin
Berkovitch M, et al. Acute digoxin overdose in a newborn with renal failure: use of digoxin immune Fab and peritoneal dialysis. *Therapeutic Drug Monitoring* 1994; 16:531-33. (2001)
Clifton GD, et al. Free and total serum digoxin concentrations in a renal failure patient after treatment with digoxin immune Fab. *Clinical Pharmacy* 1989; 8:441-444. (2001)

Disodium pamidronate (see pamidronate)

Disopyramide

- Kaji T, et al. Clinical pharmacokinetics and effects of an oral sustained-release preparation of disopyramide prescribed for patients undergoing maintenance hemodialysis. *Blood Purif* 2000; 18:55-58. (2002)
- Disulfiram**
Johansson B. Review of the pharmacokinetics and pharmacodynamics of disulfiram and its metabolites. *Acta Psychiatr Scand* 1992; 86:15-26.
- Divalproex**
Same data as previously presented for valproic acid (same chemical entity). (2002)
- Docetaxel**
Mencoboni M, et al. Docetaxel pharmacokinetics with pre- and post-dialysis administration in a hemodialyzed patient. *Chemotherapy* 2006; 52:147-150. (2007)
Hochegger K, et al. Pharmacokinetic analysis of docetaxel during haemodialysis in a patient with locally advanced non-small cell lung cancer. *Nephrol Dial Transplant* 2007; 22:289-90. (2008)
Kaneda H, et al. Pharmacokinetics of docetaxel in a patient with non-small cell lung cancer undergoing continuous ambulatory peritoneal dialysis. *J Thorac Oncol.* 2012 Mar;7(3):621-2. (2013)
- Doripenem**
Doribax prescribing information (2008)
Tanoue K, et al. Removal of doripenem during hemodialysis and the optimum dosing regimen for patients undergoing hemodialysis. *Ther Apher Dial* 2011;15(3):327-33 (2013)
- Dornase alfa**
Micromedex drug evaluation (2003)
- Dothiepin**
Micromedex drug evaluation. (2002)
- Doxercalciferol**
Hectorol package insert (protein binding) (2002)
- Dronedarone**
Multaq prescribing information (2010)
- Drospirenone**
Angeliq prescribing information (2008)
- Drotrecogin alfa**
Xigris package insert. (2002)
- Duloxetine**
Cymbalta package insert (2005)
- Dutasteride**
Drugdex drug evaluation (2003)
Duodart package insert 2012
- Dicycloverine (see dicyclomine) (2008)**
- Ecallantide**
Kalbitor PI (2011)
- Eculizumab**
Soliris prescribing information (2008)
- Efalizumab**
Raptiva prescribing information (2005)

Efavirenz

Gill MJ, et al. Efavirenz dosing in patients receiving continuous ambulatory peritoneal dialysis. *AIDS* 2000; 14:1062-1064. (2002)

Izzedine H, et al. Pharmacokinetics of efavirenz in a patient on maintenance haemodialysis. *AIDS* 2000; 14:618-19 (2001)

Eletriptan

Relpax PI 2012

Eltrombopag

Revolade PI 2012

Emtricitabine

Emtriva prescribing information (2004)

Enalapril (enalaprilat)

Tsuruoka S, et al. Clearance of imidapril, an angiotensin-converting enzyme inhibitor, during hemodialysis in hypertensive renal failure patients: comparison with quinapril and enalapril. *J Clin Pharmacol* 2007; 47:259. (2008) Note: filed under imidapril.

Enfuvirtide

Fuzeon package insert (2004)

Tebas P, et al. Enfuvirtide does not require dose adjustment in patients with chronic kidney failure. *J Acquir Immune Defic Syndr.* 2008; 47:342. (2009)

Enoxaparin

McMahon LP, et al. Effects of different dialysis membranes on serum concentration of epoetin alfa, darbepoetin alfa, enoxaparin, and iron sucrose during dialysis. *Am J Kidney Dis* 2004; 44:509-516. (2006)

Brophy DF, et al. The pharmacokinetics of enoxaparin do not correlate with its pharmacodynamic effect in patients receiving dialysis therapies. *J Clin Pharmacol* 2006; 46:887. (2007)

Entacapone

Comtan package insert.

Entecavir

Baraclude packet insert (2006)

Eplerenone

Inspra prescribing information (2004) and communication from company regarding dialyzer used..

Ravis WR, et al. Pharmacokinetics of eplerenone after single and multiple dosing in subjects with and without renal impairment. *Clin Pharmacol Ther* 2004; 75 (2):P37 abstract (2005)

Ravis WR, et al. Pharmacokinetics of eplerenone after single and multiple dosing in subjects with and without renal impairment. *J Clin Pharmacol* 2005; 45:810-821. (2006)

Epoetin

McMahon LP, et al. Effects of different dialysis membranes on serum concentration of epoetin alfa, darbepoetin alfa, enoxaparin, and iron sucrose during dialysis. *Am J Kidney Dis* 2004; 44:509-516. (2006)

Epoetin beta

Neorecormon package insert (2007)

Eptacog alfa

See Factor VII

Ergotamine

Ergomar package insert. (2002)

Personal communication with company indicated no studies have been done. (2003)

Eribulin

Halaven prescribing information (2012)

Erlotinib

Tarceva package insert (2006)

Togashi Y, et al. Pharmacokinetics of erlotinib and its active metabolite OSI-420 in patient with non-small cell cancer and chronic renal failure who are undergoing hemodialysis. *J Thorac Oncol.* 2010;5:601-605. (2011)

Ertapenem

Invanz information from PDR (2003)

Mistry GC, et al. Pharmacokinetics of ertapenem in patients with varying degrees of renal insufficiency and in patients on hemodialysis. *J Clin Pharmacol* 2006; 46:1128-1138. (2007)

Cardone KE et al. Ertapenem pharmacokinetics and pharmacodynamics during continuous ambulatory peritoneal dialysis. *Antimicrob Agents Chemother.* 2012 Feb;56(2):725-30

Eslicarbazine

Maia J, et al. Effect of renal impairment on the pharmacokinetics of eslicarbazine acetate. *Int J Clin Pharmacol Ther* 2008; 46:119-130. (2009)

Esomeprazole

Nexium package insert. (2002)

Estazolam

Micromedex drug evaluation (2010)

Estradiol

Stehman-Breen C, et al. Pharmacokinetics of oral micronized B-estradiol in postmenopausal women receiving maintenance hemodialysis. *Kidney Int.* 2003; 64:290-4. (2004)

Micromedex drug evaluation (2010)

Estrone

Stehman-Breen C, et al. Pharmacokinetics of oral micronized B-estradiol in postmenopausal women receiving maintenance hemodialysis. *Kidney Int.* 2003; 64:290-4. (2004)

Estropipate

Micromedex drug evaluation (2010)

Etanercept

Micromedex-Martindale (2004)

Enbrel package insert (2006)

Don BR, et al. The pharmacokinetics of etanercept in patients with end-stage renal disease on haemodialysis. *Journal of Pharmacy and Pharmacology* 2005; 57:1407.

Ethacrynic acid

Micromedex (2008)

Ethinyl estradiol

Orme MLE, et al. Clinical pharmacokinetics of oral contraceptive steroids. *Clin Pharmacokinet* 1983; 8:95-136. (2002)

Mircette prescribing information (2008)

Ethionamide
Malone RS, et al. The effect of hemodialysis on cycloserine, ethionamide, para-aminosalicylate, and clofazimine. *Chest* 1999; 116:984-990. (2001)

Etodolac
Micromedex drug evaluation (2010)

Etoposide
Watanabe R, et al. Feasibility of combination chemotherapy with cisplatin and etoposide for haemodialysis patients with lung cancer. *Br J Cancer*. 2003; 88:25-30. (2004)

Etoricoxib
Agrawal NGB, et al. Pharmacokinetics of etoricoxib in patients with renal impairment. *J Clin Pharmacol* 2004; 44:48-58. (2006)

Etravirine
Intelence prescribing information (2009)
Giguere P, et al. Pharmacokinetics of darunavir, etravirine, and raltegravir in an HIV-infected patient on haemodialysis. *AIDS* 2009, 23, 740-2. (2011)

Everolimus
Listed in *Dialysis of Drugs US 2010 edition* (2011)

Exenatide
Byetta package insert (2006)- no data
Linnebjerg H, et al. Effect of renal impairment on the pharmacokinetics of exenatide. *Br J Clin Pharmacol* 2007; 64:317-327. (2008) - no data

Exemestane
Aromasin package insert (2001)

Ezetimibe
Zetia prescribing information (2004)

Ezogabine
Potiga prescribing information (2012)

Factor VII
Micromedex-Martindale (2004)

Fampridine
See dalfampridine Fampyra PI (2013)

Febuxostat
Uloric prescribing information (2010)

Felodipine
Plendil prescribing information (2010)

Fenofibrate
Tricor prescribing information (2005)
Desager JP, et al. Effect of hemodialysis of plasma kinetics of fenofibrate in chronic renal failure. *Nephron* 1982; 31:51-4. (2005)

Fenoprofen
Nalfon prescribing information (2010)

Fentanyl
Bastani B, et al. Removal of morphine but not fentanyl during haemodialysis. *Nephrol Dial Transplant* 1997; 12:2802-3. (2001)

Ferric carboxymaltose

- Geisser P. The pharmacology and safety profile of ferric carboxymaltose (Ferinject): structure/reactivity relationships of iron preparations. *Port J Nephrol Hypert* 2009, 23, 11-16 (2013)
- Ferumoxytol
Landry R, et al. Pharmacokinetic study of ferumoxytol: a new iron replacement therapy in normal subjects and hemodialysis patients. *Am J Nephrol* 2005; 25:400-410. (2006)
Feraheme prescribing information (2010)
- Fidaxomicin
Dificid prescribing information (2012)
- Fingolimod
Gilenya prescribing information (2012)
- Fleroxacin
Uehlinger DE, et al. Pharmacokinetics of fleroxacin after multiple oral dosing in patients receiving regular hemodialysis. *Antimicrob Agents Chemother.* 1996; 40:1903-09. (2001)
- Florbetapir F18
Amyvid PI (2013)
- Flucloxacillin
Micromedex (Martindale) (2002)
- Flucortolone
Micromedex drug evaluation. (2002)
- Fluorouracil
Galletti PM, et al. Hemodialysis in cancer chemotherapy. *Trans ASAIO.* 1996; 12:20. (2003)
Keller F, et al. Combined haemoperfusion, haemofiltration and haemodialysis for systemic detoxification in locoregional 5-fluorouracil therapy. *Cancer Chemother Pharmacol.* 1991; 29:164-6. (2003)
Rengelshausen J, et al. Pharmacokinetics of 5-fluorouracil and its catabolites determined by ¹⁹F Nuclear magnetic resonance spectroscopy for a patient on chronic hemodialysis. *Am J Kidney Dis.* 2002; 39:E10. (2003)
Watayo Y, et al. Drug monitoring during FOLFOX6 therapy in a rectal cancer patient on chronic hemodialysis. *Jpn J Clin Oncol.* 2010;40:360-364. (2011)
- Fluoxetine
Prozac package insert (2010)
- Flurbiprofen
Ansaid package insert (2010)
- Fluticasone
Micromedex drug evaluation. (2002)
- Fluvastatin
Appel-Dingemans, et al. Pharmacokinetics of fluvastatin in subjects with renal impairment and nephrotic syndrome. *J Clin Pharmacol.* 2002; 42:312-8. (2003)
Ichimaru N, et al. Pharmacokinetics and lipid-lowering effect of fluvastatin in hypercholesterolaemic patients on maintenance haemodialysis. *J Int Med Res.* 2004; 32:45-52.
Micromedex drug evaluation (2010)
- Fluvoxamine

- Kamo T, et al. Efficacy and pharmacokinetics of fluvoxamine maleate in patients with mild depression undergoing hemodialysis. *Psychiatry Clin Neurosci.* 2004; 58:133-7. (2005)
- Folic acid
Skoutakis VA, et al. Folic acid dosage for chronic hemodialysis patients. *Clin Pharmacol Ther.* 1975; 18:200-4. (2001)
- Follitropin beta
Follistim AQ Cartridge prescribing information (no data) (2006)
- Fondaparinux
Arixtra prescribing information (2003)
- Fosamprenavir
Lexiva prescribing information (2004)
- Fosaprepitant
Emend prescribing information (2009)
- Foscarnet
Aweeka FT, et al. Effect of renal disease and hemodialysis on foscarnet pharmacokinetics and dosing recommendations. *J Acquired Immune Deficiency Syndromes and Human Retrovirology.* 1999; 20:350-7. (2001)
Sam R, et al. Removal of foscarnet by hemodialysis using dialysate-side values. *Int J Artif Organs* 2000; 23:165-167. (2002)
- Fosphenytoin
Micromedex drug evaluation (2010)
- Fulvestrant
Faslodex prescribing information (2004)
- Furosemide
Micromedex (2008)
- Gabapentin
Lal R et al. Clinical pharmacokinetics of gabapentin after administration of gabapentin enacarbil extended-release tablets in patients with varying degrees of renal function using data from an open-label, single-dose pharmacokinetic study. *Clin Ther.* 2012 Jan;34(1):201-13. Epub 2011 Dec 28. (2013)
- Gadobenate
Multihance prescribing information (2011)
- Gadobutrol
Tombach B, et al. Using highly concentrated gadobutrol as an MR contrast agent in patients also requiring hemodialysis: safety and dialysability. *AJR* 2002; 178:105. (2005)
- Gadodiamide
Saitoh T, et al. Dialyzability of gadodiamide in hemodialysis patients. *Radiation Med* 2006; 24:445-451. (2008)
Joffe P, et al. The pharmacokinetics of gadodiamide in patients with severe renal insufficiency treated conservatively or undergoing hemodialysis or continuous ambulatory peritoneal dialysis. *Acad Radiol* 2011, 18, 1060.(2012)
- Gadolinium
Okada S, et al. Safety of gadolinium contrast agent in hemodialysis patients. *Acta Radiologica* 2001; 42:339-341. (2002)

Dorsam J, et al. Elimination of gadolinium-DTPA by peritoneal dialysis. *Nephrol Dial Transplant* 1995; 10:1228-1230.

Gadopentetate (Gd-DTPA, Gadoteric acid)
 Choyke PL, et al. Case report: gadopentetate dimeglumine enhanced MRI in an anemphric patient on dialysis. *Clin Radiol.* 1990; 41:430-2. (2004)
 Magnevist prescribing information (2005)
 Choyke PL, et al. Clearance of gadolinium chelates by hemodialysis: an in vitro study. *JMRI* 1995; 4:470-472. (2005)
 Haustein J, et al. Elimination of Gd-DTPA by means of hemodialysis. *Eur J Radiol* 1990; 11:227-229. (2005)

Gadoxetate
 Eovist prescribing information (2009)
 Gschwend S, et al. Pharmacokinetics and imaging properties of Gd-EOB-DTPA in patients with hepatic and renal impairment. *Invest Radiol.* 2011 Sep;46(9):556-66. (2013)

Gadoxetic acid
 Micromedex - Martindale (2007)

Galactosidase
 Also see agalsidase alfa (Replagal) 2006

Gallopamil
 Micromedex drug evaluation (2010)

Garenoxacin
 Krishna G, et al. Garenoxacin pharmacokinetics in subjects with renal impairment. *Curr Med Res Opin* 2007; 23:649-657. (2008)

Gefitinib
 Micromedex drug evaluation (2004)
 Shinagawa N, et al. Gefitinib administration in a patient with lung cancer undergoing hemodialysis. *Lung Cancer* 2007; 58:422-424. (2009)

Gemcitabine
 Kiani A, et al. Pharmacokinetics of gemcitabine in a patient with end-stage renal disease: effective clearance of its main metabolite by standard hemodialysis treatment. *Cancer Chemother Pharmacol.* 2003; 51:266-70. (2004)
 Masumori N, et al. Measurement of plasma concentration of gemcitabine and its metabolite dFdU in hemodialysis patients with advanced urothelial cancer. *Jpn J Clin Oncol* 2008; 38:182. (2009)
 Koolen SLW et al. Pharmacokinetics of gemcitabine and metabolites in a patient with double-sided nephrectomy: A case report and review of the literature. *The Oncologist* 2009;14:944-948. (confirmation of earlier findings).

Gemfibrozil
 Lopid package insert (2010)

Gemifloxacin
 Factive package insert (2004)

Gemtuzumab
 Mylotarg package insert.

Gentamicin

- Sowinski KM, et al. Influence of hemodialysis on gentamicin pharmacokinetics, removal during hemodialysis and recommended dosing. *Clin J Am Soc Nephrol.* 2008; 3:355-361. (2009)
- Varghese JM et al. Pharmacokinetics of intraperitoneal gentamicin in peritoneal dialysis patients with peritonitis. *CJASN* 2012, 7, 1249-56. (2013)
- Gestodene
 Tauber U, et al. Pharmacokinetics of gestodene and ethinyl estradiol after oral administration of a monophasic contraceptive. *Am J Obstet Gynecol* 1990; 163:1414-1420. (2002)
- Gliclazide
 Micromedex drug evaluation (2002)
- Glimepiride
 Micromedex drug evaluation (2010)
- Glipizide
 Micromedex drug evaluation (2010)
- Glucarpidase
 Voraxaze package information (2013)
- Glyburide (see glibenclamide)
 Micromedex drug evaluation (2010)
- Golimumab
 Simponi prescribing information (2011)
- Growth hormone
 Langbakke IH, et al. Pharmacokinetics and pharmacodynamics of growth hormone in patients on chronic haemodialysis compared with matched healthy subjects: an open, nonrandomized, parallel-group trial. *Clin Endocrinol* 2007; July 18 e-pub (2008)
 Norditropin prescribing information (2008)
- Guanabenz
 Micromedex drug evaluation (2010)
- H1N1 Vaccine
 Influenza A PI
- Haloperidol
 Micromedex drug evaluation (2010)
- Hetastarch (pentastarch)
 2001 AHFS. (2002)
- Hirudin
 Bucha E, et al. In vitro study of r-hirudin permeability through membranes of different haemodialysers. *Nephrol Dial Transplant.* 1999;14:2922-6 (2001)
 Willey ML, et al. Removal of lepirudin, a recombinant hirudin, by hemodialysis, hemofiltration, or plasmapheresis. *Pharmacotherapy* 2002; 22:492-9. (2003)
 Vanholder R, et al. Pharmacokinetics of recombinant hirudin in hemodialyzed end-stage renal failure patients. *Thromb Haemost* 1997; 77:650-5. (2003)
- Human growth hormone
 Genotropin prescribing information (2011)
- Hydrochlorothiazide
 Exforge HCT package insert (2011)
- Hydromorphone

Davison SN, et al. Pain management in chronic kidney disease: the pharmacokinetics and pharmacodynamics of hydromorphone and hydromorphone-3-glucuronide in hemodialysis patients. *J Opioid Management* 2008; 4:335-6, 339-44. (2011)

Hydroxocobalamin (and cyanocobalamin)
Chandna SM, et al. Low serum vitamin B12 levels in chronic high-flux haemodialysis patients. *Nephron* 1997; 75:259-263. (2002)

Hydroxycarbamide (see hydroxyurea) (2008)

Hydroxyzine
Micromedex drug evaluation (2010)

Ibandronate
Bergner R, et al. Elimination of intravenously administered ibandronate in patients on haemodialysis: a monocentre study. *Nephrol Dial Transplant* 2002; 17:1281-5. (2003)

Ibritumomab
Zevalin package insert (2006)

Ibuprofen
Micromedex drug evaluation (2010)

Icatibant
Firazyr package insert (2012)

Icospent ethyl
Vascepa PI (2013)

Idarubicin
Idamycin package insert (2010)

Idebenone
Catena package insert (2009)

Idursulfase
Elaprase prescribing information (2007)

Ifosfamide
Carlson L, et al. Toxicity, pharmacokinetics, and in vitro hemodialysis clearance of ifosfamide and metabolites in an anephric pediatric patient with Wilms' tumor. *Cancer Chemother Pharmacol*. 1998; 41:140-146. (2001)

Iloperidone
Fanapt prescribing information (2010)

Imatinib
Gleevec package insert. (2006)
Pappas P, et al. Pharmacokinetics of imatinib mesylate in end stage renal disease. A case study. *Cancer Chemother Pharmacol* 2005; 56:358-360. (2006)

Imidapril (imidaprilat)
Tsuruoka S, et al. Clearance of imidapril, an angiotensin-converting enzyme inhibitor, during hemodialysis in hypertensive renal failure patients: comparison with guanapril and enalapril. *J Clin Pharmacol* 2007; 47:259-263. (2008)

Imiglucerase
PDR entry for Cerezyme. (2002)
Cerezyme package insert (2007)

Imipramine
Micromedex drug evaluation (2010)

Indacaterol

Arcapta Neohaler prescribing information (2012)
Onbrez Breezhaler PI (2012)

Indinavir
Izzedine H, et al. Indinavir pharmacokinetics in haemodialysis. *Nephrol Dial Transplant.* 2000; 15:1102-3. (2001)

Indomethacin
Micromedex drug evaluation (2010)

Infliximab
Remicade package insert. (2002)

Influenza A (H1N1)
Influenza A (H1N1) prescribing information (2011)

Ingenol mebutate
Picato package information (2013)

Insulin aspart
PDR entry for NovoLog (2003)
Novolog prescribing information (2006)

Insulin detemir
Jacobsen LV, et al. Pharmacokinetics of insulin detemir in subjects with renal or hepatic impairment. *Diabetes* 2002; 51:A102. (2006)
Levemir prescribing information (2006)

Insulin glargine
Lantus package insert. (2001)

Insulin glulisine
Apidra prescribing information (2005)

Insulin lispro
Aisenpreis U, et al. Pharmacokinetics and pharmacodynamics of insulin Lispro compared with regular insulin in haemodialysis patients with diabetes mellitus. *Nephrol Dial Transplant.* 1999; 14(Suppl 4):5-6. (2001)

Interferons
See peginterferons.

Iobenguane
AdreView prescribing information (2009)

Iodixanol
Bailie GR, et al. Determination of iodixanol hemodialysis clearance using a novel in vitro system. *Clin Research & Reg Affairs.* 1996; 13:111-124. (2001)

Ioflupane I-123
Da TSCAN prescribing information (2012)

Iohexol
Furukawa T, et al. Elimination of low-osmolality contrast media by hemodialysis. *Acta Radiologica.* 1996; 37:966-971. (2002)
Horiuchi K, et al. Elimination of non-ionic contrast medium by hemodialysis in patients with impaired renal function. *Nippon Ika Daigaku Zasshi.* 1999; 66:305-7. (2001)
Omnipaque package insert. (2001)

Iomeprol

- Lorusso V, et al. Pharmacokinetics and safety of iomeprol in healthy volunteers and in patients with renal impairment of end-stage renal disease requiring hemodialysis. *Invest Radiol* 2001; 36:309-316. (2002)
- Iwamoto M, et al. Elimination of iomeprol in patients undergoing continuous ambulatory peritoneal dialysis. *Perit Dial Int.* 1999; 19:380-385. (2002)
- Ueda J, et al. Permeability of iodinated and MR contrast media through two types of hemodialysis membrane. *Europ J Rad* 1999; 31:76-80. (2008)
- Iopamidol**
- Donnelly PK, et al. Clearance of iopamidol, a non-ionic contrast medium, by CAPD in patients with end-stage renal failure. *Br J Radiol* 1992; 65:1108-1113. (2002)
- Donnelly PK, et al. Hemodialysis and iopamidol clearance after subclavian venography. *Invest Radiol* 1993; 28:629-632. (2002)
- Iopromide**
- Schindler R, et al. Removal of contrast media by different extracorporeal treatments. *Nephrol Dial Transplant* 2001; 16:1471-1474. (2002)
- Matzkies FK, et al. Influence of dialysis procedure, membrane surface and membrane material on iopromide elimination in patients with reduced kidney function. *Am J Nephrol* 2000; 20:300-304. (2002)
- Matzkies FK, et al. Clearance of iopromide during haemodialysis with high- and low-flux membranes. *Acta Radiologica.* 1999; 40:220-223. (2005)
- Iotrolan**
- Furukawa T, et al. Permeability of contrast media through hemodialysis membrane. *Acta Radiologica* 1997; 38:918-921. (2008)
- Ioversol**
- Ueda J, et al. Elimination of ioversol by hemodialysis. *Acta Radiologica* 1996; 37:826-829. (2002)
- Ioxaglate**
- Furukawa T, et al. Elimination of low-osmolality contrast media by hemodialysis. *Acta Radiologica.* 1996; 37:966-971. (2002)
- Furukawa T, et al. Permeability of contrast media through hemodialysis membrane. *Acta Radiologica* 1997; 38:918-921. (2008)
- Micromedex (ioxaglic acid) (2008)
- Ueda J, et al. Permeability of iodinated and MR contrast media through two types of hemodialysis membrane. *Europ J Rad* 1999; 31:76-80. (2008)
- Ioxilan**
- Oxilan prescribing information (2007)
- Ipilimumab**
- Yervoy prescribing information (2012)
- Irbesartan**
- Marino MR, et al. Pharmacokinetics of irbesartan are not altered in special populations. *J Cardiovasc Pharmacol* 2002; 40:112-22. (2003)
- Irinotecan**
- Venat-Bouvet L, et al. Irinotecan-based chemotherapy in a metastatic colorectal cancer patient under haemodialysis for chronic renal dysfunction: two cases considered. *Anti-Cancer Drugs* 2007; 18:977-980. (2008) (The information contained in this article was

- replaced by Czock et al in 2010). Amgen Australia asked that I use Kuf 8.5 in the reference.
- Czock D, et al. Irinotecan in cancer patients with end-stage renal failure. *Ann Pharmacother* 2009; 43:363-369. (2010)
- Eloot S, et al. Middle molecule removal in low-flux polysulfone dialyzers: impact of flows and surface area on whole-body and dialyzer clearances. *Hemodial Int* 2005; 9:399. (Filed in 2010, but only used as documentation of Kuf for previous years).
- Fujita KI, Sunakawa Y, Miwa K, et al. Delayed elimination of SN-38 in cancer patient with server renal failure requiring dialysis who receive irinotecan. *Drug Metab Dispos*. 2010 Oct 27. [Epub ahead of print] (2011 - added L for high flux for SN-38).
- Iron dextran**
 Bailie GR, et al. Minimal removal of iron-dextran by conventional haemodialysis. *Clin Drug Invest*. 1997; 14:12-15. (2001)
- Iron polymaltose**
 Micromedex (Martindale) (2002)
- Iron sucrose**
 Venofer package insert. (2001)
 Venofer package insert. (2006)
 McMahan LP, et al. Effects of different dialysis membranes on serum concentration of epoetin alfa, darbepoetin alfa, enoxaparin, and iron sucrose during dialysis. *Am J Kidney Dis* 2004; 44:509-516. (2006)
- Isoniazid**
 Ahn C, et al. The effect of peritoneal dialysis on the plasma and peritonela fluid concentration of isoniazid, pyrazinamide and rifampin. Manuscript reviewed for PDI. (2003)
- Isotretinoin**
 Accutane package insert. (2002)
- Isradipine**
 DynaCirc prescribing information (2010)
- Itraconazole**
 Mohr JF, et al. Pharmacokinetics of intravenous itraconazole in stable hemodialysis patients. *Antimicrob Agents Chemother* 2004; 48:3151. (2005)
- Ivacaftor**
 Kalydeco package information (2013)
- Ketamine**
 Koppel C, et al. Effects of enzyme induction, renal and cardiac function on ketamine plasma kinetics in patients with ketamine long-term analgosedation. *Eur J Drug Metab Pharmacokin*. 1990;15:259 (abstract only) (2002)
- Ketoprofen**
 Micromedex drug evaluation (2010)
- Ketorolac**
 Micromedex drug evaluation (2010)
- L-tryptophan**
 Lesaffer G, et al. Intradialytic removal of protein-bound uraemic toxins: role of solute characteristics and of dialyser membrane. *Nephrol Dial Transplant* 2000; 15:50-7. (2003)
- Lacosamide**

Vimpat prescribing information (2011)

Lactulose
 Kristalose prescribing information (2004)

Lamivudine
 Bohjanen PR, et al. Steady-state pharmacokinetics of lamivudine in human immunodeficiency virus-infected patients with end-stage renal disease receiving chronic dialysis. *Antimicrob Agents Chemother* 2002; 46:2387-92. (2003)
 Asari A, et al. Pharmacokinetics of lamivudine in subjects receiving peritoneal dialysis in end-stage renal failure. *Br J Clin Pharmacol* 2007; 64:738-44. (2008)

Lansoprazole
 Prevacid prescribing information (2010)

Lanthanum carbonate
 Fosrenol prescribing information (2005); updated 2007

Lapatinib
 Tykerb prescribing information (2008)

Laronidase
 Aldurazyme prescribing information (2007)

Leflunomide
 Beaman JM, et al. Effect of hemodialysis on leflunomide plasma concentrations. *Ann Pharmacother* 2002; 36:75-7. (2003)

Lenalidomide
 Chen N, et al. Pharmacokinetics of lenalidomide in subjects with various degrees of renal impairment and in subjects on hemodialysis. *J Clin Pharmacol* 2007; 47:1466. (2009)

Lenograstim
 Used same data as previously presented for filgrastim. (2002)

Lead
 See CaNa₂EDTA

Lepirudin
 Same data as previously presented for hirudin (same product). (2002)

Levetiracetam
 Keppra package insert. (2001)

Levodopa
 Anderson RJ, et al. *Clinical Use of Drugs in Renal Failure* (1976) (2001)

Levocarnitine
 Same data as previously presented for carnitine. (2002)
 Bain MA, et al. Oral L-carnitine: metabolite formation and hemodialysis. *Curr Drug Metab.* 2006; 7:811-816. (2008)

Levocetirizine
 Xyzal prescribing information (2008)
 Micromedex drug evaluation (2010)

Levofloxacin
 Sowinski KM, et al. Levofloxacin pharmacokinetics in ESRD and removal by the cellulose acetate high performance-210 hemodialyzer. *Am J Kidney Dis.* 2003; 42:342-9. (2004)
 Levaquin prescribing information (2009)
 Tsuruoka S, et al. Pharmacokinetics of multiple-dose levofloxacin in hemodialysis

patients. *Am J Kidney Dis.* 2011 Sep;58(3):498-9. (2013)

Levomethadyl
Orlam product information from PDR. (2002)

Levosimendan
Puttonen J, et al. Effect of severe renal failure and haemodialysis on the pharmacokinetics of levosimendan and its metabolites. *Clin Pharmacokinet* 2007; 46:235-46. (2008)

Lidocaine
De Martin S, et al. Differential effect of chronic renal failure on the pharmacokinetics of lidocaine in patients receiving and not receiving hemodialysis. *Clin Pharmacol Ther* 2006; 80:597-606. (2008)

Linagliptin
Tradjenta prescribing information (2012)

Linezolid
Zyvox package insert. (2001)
Brier ME, et al. Pharmacokinetics of linezolid in subjects with renal dysfunction. *Antimicrob Agents Chemother.* 2003; 47:2775-80. (2004)
Fiaccadori E, et al. Removal of linezolid by conventional intermittent hemodialysis, sustained low-efficiency dialysis, or continuous venovenous hemofiltration in patients with acute renal failure. *Crit Care Med* 2004; 32:2437. (2006)
Fiaccadori E, et al. Does haemodialysis significantly affect serum linezolid concentrations in critically ill patients with renal failure? A pilot investigation. *Nephrol Dial Transplant* 2006; 21:1402.

Liraglutide
Victoza prescribing information (2011).

Lisdexamfetamine
Vyvanse prescribing information (2011).

Lithium
Eyer F, et al. Lithium poisoning: pharmacokinetics and clearance during different therapeutic measures. *J Clin Psychopharmacol* 2006; 26:325. (2007)
Bjarnason NH, et al. Optimizing lithium dosing in hemodialysis. *Ther Drug Monit* 2006; 28:262. (2007)

Locaserin
Belviq PI (2013)

Lopinavir
Kaletra package insert. (2002)
Izzedine H, et al. ABT 378/r: a novel inhibitor of HIV-1 protease in haemodialysis. *AIDS* 2001; 15:662-664. (2009)

Loratadine
Micromedex drug evaluation (2010)

Losartan
Sica DA, et al. Pharmacokinetics and blood pressure response of losartan in end-stage renal disease. *Clin Pharmacokinetic* 2000; 38:519-526. (2002)

Loteprednol
Alrex PI (Canada 2010)

Lovastatin

Mevacor prescribing information (2010)
 Lubiprostone
 Amitiza prescribing information (2009)
 Lucinactant
 Surfaxin PI (2013)
 Lumefantrine
 Micromedex (2009)
 Lumiracoxib
 Prexige prescribing information (2007)
 Lurasidone HCl
 Latuda prescribing information (2012)
 Macrogol 3350
 Osmolax PI (2012)
 Magnesium oxide
 Prepopik PI (2013)
 Maprotiline
 Micromedex drug evaluation (2010)
 Mebendazole
 Allgayer H, et al. Lack of effect of haemodialysis on mebendazole kinetics: studies in a patient with echinococcosis and renal failure. *Eur J Clin Pharmacol.* 1984; 27:243-245. (2002)
 Mecasermin
 Increlex package insert (2006)
 Mechlorethamine
 Micromedex (2008)
 Meclofenamate
 Micromedex drug evaluation (2010)
 Medroxyprogesterone
 Micromedex drug evaluation (2001)
 Prempro package insert (2001)
 Melatonin/6-sulfatoxymelatonin
 Ludemann P et al. Clearance of melatonin and 6-sulfatoxymelatonin by hemodialysis in patients with end-stage renal disease. *J. Pineal Res.* 2001;31:222-227.
 Merenamic acid
 Ponstel prescribing information (2010)
 Meloxicam
 Turck D, et al. Pharmacokinetics of meloxicam in patients with end-stage renal failure on haemodialysis: a comparison with healthy volunteers. *Eur J Clin Pharmacol.* 1996; 51:309-313. (2001)
 Mobic package insert (2001)
 Meperidine (normeperidine)
 Hassan H, et al. Successful treatment of normeperidine neurotoxicity by hemodialysis. *Am J Kidney Dis.* 2000; 35:146-149. (2001)
 Meropenem
 Goldstein SL, et al. Meropenem pharmacokinetics in children and adolescents receiving hemodialysis. *Pediatr Nephrol* 2001; 16:1015-8. (2003)

Mesalamine (5-ASA)

Verzijl JM, et al. Clearance of an oral delayed-release mesalazine preparation (Salofalk) by haemodialysis– pharmacokinetic profile of mesalazine related to the effects of dialysis. *Nephrol Dial Transplant* 2000; 15: 736-738. (2002)

Verzijl JM, et al. Clearance of an oral delayed-release mesalazine preparation by haemodialysis- pharmacokinetic profile of mesalazine related to the effects of dialysis. *Nephrol Dial Transplant* 2000; 15:736. (2009)

Mestranol

2001 AHFS. (2002)

Mesuximide (see methsuximide) (2008)

Metformin

Galvumet PI 2012

Methicillin

Micromedex drug evaluation (2010)

Methodone

Micromedex drug evaluation (2010)

Methohexital

Brevital package insert (2004)

Methotrexate

Diskin CJ, et al. Removal of methotrexate by peritoneal dialysis and hemodialysis in a single patient with end-stage renal disease. *Am J Med Sci* 2006; 332:156-158. (2008)

Saland JM, et al. Effective removal of methotrexate by high-flux hemodialysis. *Pediatr Nephrol* 2002; 17:825-829. (2008)

Wall SM, et al. Effective clearance of methotrexate using high-flux hemodialysis membranes. *Am J Kidney Dis* 1996; 28:846-54. (2008)

Murashima M et al. Methotrexate clearance by high-flux hemodialysis and peritoneal dialysis: a case report. *Am J Kidney Dis*. 2009;53:871-874. (2011)

Methoxy polyethylene glycol-epoetin beta

Mircera prescribing information (2008)

Methylamine

Ponda MP et al. Methylamine clearance by haemodialysis is low. *Nephrol Dial Transplant*. 2010;25:1608-1613.

Methyl aminolevulinate HCl

Metvix PI (Canada 2010)

Methylphenobarbitone

Prominal prescribing information (MIMS) (2002)

Metoclopramide

Micromedex drug evaluation (2010)

Metolozone

Micromedex drug evaluation (2010)

Metronidazole

Burda AM, et al. Hemodialysis clearance of metronidazole following overdose. *Ann Pharmacotherapy* 2005; 39:1366. (2006)

Mianserin

Jansen FHJ, et al. Poisoning with antidepressants. *Br Med J*. 1 October ?? (2002)

Micafungin

Mycamine package insert (2006)

Miconazole
Micromedex drug evaluation (2010)

Midazolam
Micromedex drug evaluation (2010)

Midodrine
Blowey DL, et al. Midodrine efficacy and pharmacokinetics in a patient with recurrent intradialytic hypotension. *Am J Kidney Dis.* 1996; 28:132-136. (2001)

Mifepristone
Mifeprex package insert. (2002)

Miglustat
Zavesca PI (2012)

Milnacipran
Savella prescribing information (2010)

Mirabegron
Myrbetriq PI (2013)

Mirtazapine
Stimmel GL, et al. Mirtazapine: An antidepressant with noradrenergic and specific serotonergic effects. *Pharmacotherapy* 1997; 17:10-21. (1998)
Schlotterbeck PM, et al. No influence of dialysis on mirtazapine- a case report. *Pharmacopsychiatry* 2008; 41:259-260. (2010)

Mitoxantrone
Micromedex drug evaluation (2010)

Moroctocog alfa
Micromedex drugdex drug evaluation (2004)

Morphine
Bastani B, et al. Removal of morphine but not fentanyl during haemodialysis. *Nephrol Dial Transplant* 1997; 12:2802-3. (2001)

Moxifloxacin
Skalioti C, et al. Pharmacokinetics of moxifloxacin in patients undergoing continuous ambulatory peritoneal dialysis. *Perit Dial Int.* 2009;29:575-579. (2011)

Mycophenolate
Micromedex drug evaluation (2010)

Nalidixic acid
PDR entry for NegGram. (2002)

Nalmefene
Matzke GR, et al. The effect of renal insufficiency and hemodialysis on the pharmacokinetics of nalmefene. *J Clin Pharmacol.* 1996; 36:144-151. (2001)
Micromedex drug evaluation (2010)

Naloxone
Targin PI (2012)

Naltrexone
Kambia NK, et al. Pharmacokinetics and dialysability of naltrexone in patients undergoing hemodialysis. *Eur J Drug Met Pharmacokinet* 2004; 29:225-230. (2006)
Micromedex drug evaluation (2010)

Naproxen

Micromedex drug evaluation (2010)

Natalizumab
Tysabri package insert (2006)

Nateglinide
Starlix package insert. (2002)
Inoue T, et al. Pharmacokinetics of nateglinide and its metabolites in subjects with type 2 diabetes mellitus and renal failure. *Clin Nephrol* 2003; 60:90-5. (2004)

Nebivolol
Bystolic prescribing information (2009)

Nefazodone
Micromedex drug evaluation (2010)

Nefopam
Mimoz O, et al. Nefopam pharmacokinetics in patients with end-stage renal disease. *Anesth Analg* 2010, 111, 1146-53. (2012)

Nelarabine
Arranon package insert (2008)

Nelfinavir
Armbruster C, et al. Pharmacokinetics of nelfinavir during haemodialysis in a patient with HIV infection. *AIDS*. 2000; 14:99-101. (2001)
Paci-Bonaventure S, et al. Lack of removal of nelfinavir during a haemodialysis session in an HIV-infected patient with hepatic and renal insufficiency. *Nephrol Dial Transplant* 2001; 16:642-643. (2002)
Taylor S, et al. Pharmacokinetics of nelfinavir and nevirapine in a patient with end-stage renal failure on continuous ambulatory peritoneal dialysis. *J Antimicrob Chemother.* 2000; 45:709-717. (2001)

Neomycin
Krumlovsky FA, et al. Dialysis in treatment of neomycin overdosage. *Ann Intern Med.* 1972; 76:443-6.
Masur H, et al. Neomycin toxicity revisited. *Arch Surg* 1976; 111:822-5. (2003)

Nesiritide
Natreacor package insert. (2002)

Nevirapine
Izzedine H, et al. Pharmacokinetic of nevirapine in haemodialysis. *Nephrol Dial Transplant* 2001; 16:192-193. (2002)
Taburet A-M, et al. Antiretroviral drug removal by haemodialysis. *AIDS* 2000; 14:902-903. (2001)
Taylor S, et al. Pharmacokinetics of nelfinavir and nevirapine in a patient with end-stage renal failure on continuous ambulatory peritoneal dialysis. *J Antimicrob Chemother.* 2000; 45:709-717. (2001)

Nicardipine
Micromedex drug evaluation (2010)

Nicotine
Molander L, et al. Pharmacokinetics of nicotine in kidney failure. *Clin Pharmacol Ther.* 2000; 68:250-60. (2001)

Nifedipine
Micromedex drug evaluation (2010)

Nilotinib
Tasigna prescribing information (2008)
Onaka T, et al. Pharmacokinetics of nilotinib in imatinib-resistant/intolerant chronic myeloid leukemia patients on hemodialysis for chronic renal failure. *Am J Hematol.* 2012 Apr;87(4):451. (2013)

Nimodipine
Micromedex drug evaluation (2010)

Nisoldipine
Micromedex drug evaluation (2010)

Nitazoxamide
Micromedex (2004)

Nitisinone
Orfadin PI (2012)

Nitrendipine
Micromedex drug evaluation (2010)

Nomegestrol
Zoely PI (2013)

Nonacog alfa
Alphanine SD prescribing information (2005)

Norethisterone
(see norethindrone) (2008)

Norgestimate
Info downloaded from Internet (2003)
Ortho Tri-Cyclen Lo prescribing information (2008)

Nortriptyline
Micromedex drug evaluation (2010)

Nystatin
Micromedex drugdex drug evaluation (2004)

Octacog alfa
Advate prescribing information (2005)

Ofatumumab
Arzerra prescribing information (2011)

Ofloxacin
Thalhammer F, et al. Ofloxacin clearance during hemodialysis: a comparison of polysulfone and cellulose acetate hemodialyzers. *Am J Kidney Dis.* 1998; 32:642-645. (2001)

Olanzapine
Zyprexa prescribing information (2010)

Olmesartan
Micromedex (2004)
Tanaka H, et al. Pharmacokinetics of olmesartan medoxomil in hemodialysis patients: little effect of dialysis upon its pharmacokinetics. *Clin Exp Nephrol.* 2009; 13:61-65. (2009)
Sevikar PI 2012

Omalizumab
Xolair prescribing information (2005)

Omega-3-acid ethyl esters
 Omacor PI (2012)

Oprelvekin
 Neumega prescribing information (2005)

Oritavancin
 Kumar A et al. In vitro characterization of oritavancin clearance from human blood by low-flux, high-flux, and continuous renal replacement therapy dialyzers. *Int J Artif Organs*. 2011 Nov;34(11):1067-74. (2013)

Orlistat
 Xenical package insert. (2000)

Ornipressin
 Por-8 Ferring prescribing information (2011)

Oseltamivir
 Robson R, et al. The pharmacokinetics and tolerability of oseltamivir suspension in patients on haemodialysis and continuous ambulatory peritoneal dialysis. *Nephrol Dial Transplant* 2006; 21:2556.
 Schreuder MF, et al. Oseltamivir dosing in children undergoing hemodiaysis. *CID* 2010;50:1427-1428. (2011)

Oxacillin
 Micromedex drug evaluation (2010)

Oxaliplatin
 Watayo Y, et al. Drug monitoring during FOLFOX6 therapy in a rectal cancer patient on chronic hemodialysis. *Jpn J Clin Oncol*. 2010;40:360-364. (2011)
 Horimatsu T, et al. Pharmacokinetics of oxaloplatin in a hemodialytic patient treated with modified FOLFOX-6 plus bevacizumab therapy. *Cancer Chemother Pharmacol* 2011, 68, 263-6. (2012)

Oxandrolone
 Micromedex drug evaluation. (2002)

Oxprenolol
 Belpaire FM, et al. Influence of continuous ambulatory peritoneal dialysis on serum alpha-1 acid glycoprotein concentration and drug binding. *Eur J Clin Pharmacol*. 1988; 35:339-343. (2002)

Oxtriphylline
 Published same data as for theophylline. (2002)

Oxycodone
 Lee MA, et al. Measurements of plasma oxycodone, nnoroxycodone and oxymorphone levels in a patient with bilateral nephrectomy who is undergoing haemodialysis. *Palliative Medicine* 2005; 19:259-260. (2006)
 Targin PI (2012)

Oxymorphone
 Micromedex drug evaluation (2010)

Paclitaxel
 Tomita M, et al. Pharmacokinetics of paclitaxel and cisplatin in a hemodialysis patient with recurrent ovarian cancer. *Anticancer Drugs* 2001; 12:485-487. (2003)
 Kawate S, et al. Pharmacokinetics of paclitaxel in a hemodialysis patient with advanced gastric cancer: a case report. *World J Gastroenterol* 2006; 12:5237-9. (2008)

- Heijns JB, et al. Continuous ambulatory peritoneal dialysis: pharmacokinetics and clinical outcome of paclitaxel and carboplatin treatment. *Cancer Chemother Pharmacol.* 2008; 62:841-847. (2009)
- Baur M, et al. High dose single-agent paclitaxel in a hemodialysis patient with advanced ovarian cancer: a case report with pharmacokinetic analysis and review of the literature. *Int J Gyn Cancer.* 2008; 18:546-570. (2009)
- Micromedex drug evaluation (2010)
- Palifermin
 Kepivance package insert (2006)
 Gillespie B, et al. Effect of renal function on the pharmacokinetics of palifermin. *J Clin Pharmacol.* 2006; 46:1460-1468. (2008)
- Palivizumab
 Synagis package insert. (2002)
- Palonosetron
 Aloxi prescribing information. (2012)
- Pamidronate
 Buttazzoni M, et al. Elimination and clearance of pamidronate by haemodialysis. *Nephrology* 2006; 11:197. (2007)
- Pancreatic extract
 Creon Micro package insert (2012)
- Panitumumab
 Vectibix prescribing information (2007)
- Pantoprazole
 Kliem V, et al. Pharmacokinetics of pantoprazole in patients with end-stage renal failure. *Nephrol Dial Transplant.* 1998; 13:1189-1193. (2001)
 Protonix prescribing information (2010)
- Papaverine
 Package insert from Bedford Laboratories (2005)
- Para-aminosalicylate
 Malone RS, et al. The effect of hemodialysis on cycloserine, ethionamide, para-aminosalicylate, and clofazimine. *Chest.* 1999; 116:984-990. (2001)
- Parecoxib
 A prodrug for valdecoxib. Used same information. (2003)
- Paricalcitol
 Cato A, et al. Lack of effect of hemodialysis on plasma concentrations of paricalcitol allows dose administration without regard to dialysis. *J Am Soc Nephrol.* 1997; 8:571A. (2001)
 Cato A, et al. Effect of hemodialysis on the pharmacokinetics of 19-nor-1 alpha,25-dihydroxyvitamin D2. *Am J Kidney Dis.* 1998; 32 (Suppl 2): S55-S60. (2001)
- Paroxetine
 Micromedex drug evaluation (2010)
- Pazopanib
 Votrient prescribing information (2011)
- Pegademase
 Micromedex (2009)
- Pegfilgrastim

Neulasta in PDR (2004)
 Yang B-B, et al. Pharmacokinetics and pharmacodynamics of pegfilgrastim in subjects with various degrees of renal function. *J Clin Pharmacol* 2008; 48:1025-1031. (2010)

Peginesatide
 Omontys PI (2013)

Peginterferon-alfa 2a and 2b
 Pegasys package insert (peginterferon alfa-2a) 2006
 Gupta SK, et al. Single-dose pharmacokinetics and safety of pegylated interferon-alfa2b in patients with chronic renal dysfunction. *J Clin Pharmacol*. 2002; 42:1109-1115. (2004)
 Barril G, et al. Pegylated interferon-alfa 2a kinetics during experimental haemodialysis: impact of permeability and pore size of dialysers. *Aliment Pharmacol Ther* 2004; 20:37-44 (2005)

Pegloticase
 Krystexxa prescribing information (2012)

Pegvisomant
 Somavert prescribing information (2004)

Pentoxifylline
 Micromedex drug evaluation (2010)

Pergolide
 Micromedex drug evaluation (2010)

Perhexiline
 Pexsig prescribing information (MIMS) (2002)

Perphenazine
 Micromedex drug evaluation (2010)

Pertuzumab
 Perjeta PI (2013)

Pethidine (see meperidine) (2008)

Phenobarbital
 Palmer BF. Effectiveness of hemodialysis in the extracorporeal therapy of phenobarbital overdose. *Am J Kidney Dis*. 2000; 36:640-643. (2001)

Phenylbutazone
 Micromedex drug evaluation (2010)

Pinaverium
 Micromedex (2008)

Pioglitazone
 Actos package insert (2000 & 2010)
 Abe M, et al. Plasma concentration of pioglitazone in patients with type 2 diabetes on hemodialysis. *Therapeut Apheresis and Dial*. 2009;13:238-239. (2011)

Piroxicam
 Micromedex drug evaluation (2010)

Pitavastatin calcium
 Livalo prescribing information (2011)

Pizotifen (also known as pizotyline)
 Sandomigran prescribing information (MIMS) (2002)
 Micromedex (2008)

Martindale (for synonym) (2008)

Plerixafor
Mozobil PI 2012

Pneumococcal vaccine
Prenvar prescribing information (2011)

Polidocanol
Asclera prescribing information (2011)

Polyethylene glycol
Davis GR, et al. Development of a lavage solution associated with minimal water and electrolyte absorption or secretion. *Gastroenterology* 1980; 78:991-995. (2002)

Porfimer
Photofrin prescribing information (2008)

Posaconazole
Courtney R, et al. Posaconazole pharmacokinetics, safety, and tolerability in subjects with varying degrees of chronic renal disease. *J Clin Pharmacol* 2005; 45:185-192. (2006)
Noxafil prescribing information (2010)

Pralatrexate
Folotyn prescribing information (2011)

Pramipexole
Micromedex drug evaluation (2010)
Mirapex prescribing information (2010)

Pramlintide
Symlin package insert (2006)

Prasugrel
Effient prescribing information (2010)

Pravastatin
Gehr TWB, et al. The pharmacokinetics of pravastatin in patients on chronic hemodialysis. *Eur J Clin Pharmacol.* 1997; 53:117-121. (2001)

Praziquantel
Pehrson PO, et al. Treatment with praziquantel in a patient with schistosomiasis and chronic renal failure. *Trans R Soc Trop Med Hyg.* 1983; 77:687-8. (2003)

Prazosin
Micromedex drug evaluation (2010)

Prednisolone
Frey FJ, et al. Nonlinear plasma protein binding and haemodialysis clearance of prednisolone. *Eur J Clin Pharmacol.* 1982; 23:65-74 (2001).

Pregabalin
Randinitis EJ, et al. Pharmacokinetics of pregabalin in subjects with various degrees of renal function. *J Clin Pharmacol.* 2003; 43:277-83. (2004)

Primaquine
Jaeger A, et al. Clinical features and management of poisoning due to antimalarial drugs. *Medical Toxicology* 1987;2:242. (2002)
Micromedex drug evaluation (2010)

Probenecid
Micromedex drug evaluation. (2002)

Prochlorperazine
Micromedex drug evaluation (2010)

Profenamine (see ethopropazine) (2008)

Progesterone
Prometrium package insert. (2001)

Proguanil
Tattersal JE, et al. Proguanil poisoning in a hemodialysis patient. *Clin Nephrol.* 1987; 28:104. (2003)
Micromedex drug evaluation (2010)

Promethazine
Micromedex drug evaluation (2010)

Propafenone
Micromedex drug evaluation (2010)

Propofol
Micromedex drug evaluation (2010)

Propoxyphene
Micromedex drug evaluation (2005)

Propranolol
Micromedex drug evaluation (2010)

Propylthiouracil
Cooper DS, et al. Pharmacology of prophythiouracil in thyrotoxicosis and chronic renal failure. *Arch Intern Med.* 1987; 147:785-786. (2002)

Protriptyline
Micromedex drug evaluation (2010)

Prucalopride succinate
Restoran (aka Resotran) PI (2013)

Pseudoephedrine
Micromedex drug evaluation (2010)

Pyrazinamide
Ahn C, et al. The effect of peritoneal dialysis on the plasma and peritonela fluid concentration of isoniazid, pyrazinamide and rifampin. Manuscript reviewed for PDI. (2003)

Pyridoxine
Leblanc M, et al. Folic acid and pyridoxal-5-phosphate losses during high-efficiency hemodialysis in patients without hydrosoluble vitamin supplementation. *J Ren Nutr.* 2000; 10:196-201. (2002)

Pyzotyline
Drugdex drug evalutaion (2005)

Quinagolide
Norprolac prescribing information (2006)

Quinapril
Accupril prescribing information (2008)
Tsuruoka S, et al. Clearance of imidapril, an angiotensin-converting enzyme inhibitor, during hemodialysis in hypertensive renal failure patients: comparison with quinapril and enalapril. *J Clin Pharmacol* 2007; 47:259-263. (2008)

Quinidine

Micromedex drug evaluation (2010)

Quinine
Micromedex drug evaluation (2010)

Rabeprazole
Drugdex drug evaluation (2000)

Raloxifene
Evista prescribing information (2010)

Raltegravir
Giguere P, et al. Pharmacokinetics of darunavir, etravirine, and raltegravir in an HIV-infected patient on haemodialysis. *AIDS* 2009, 23, 740-2. (2011)

Ranibizumab
Lucentis prescribing information (2009)

Ranitidine
Tsuruoka S, et al. Rantidine clearance during hemodialysis with high-flux membrane: comparison of polysulfone and cellulose acetate hemodialyzers. *Eur J Clin Pharmacol* 2000; 56:581-583. (2002)

Rasburicase
Elitek package insert (2006)

Reboxetine
Drugdex drug evaluation (2003)

Remifentanil
Drugdex drug evaluation (2002)

Repaglinide
Marbury TC, et al. Pharmacokinetics of repaglinide in subjects with renal impairment. *Clin Pharmacol Ther.* 2000; 67:7-15. (2001)

Reserpine
Micromedex drug evaluation (2010)

Ribavirin
Kramer TH, et al. Hemodialysis clearance of intravenously administered ribavirin. *Antimicrob Agents Chemother.* 1990; 34:489-490. (2001)
Micromedex drug evaluation (2010)
Gupta SK et al. Pharmacokinetics, safety, and tolerability of ribavirin in hemodialysis-dependent patients. *Eur J Clin Pharmacol.* 2012 Apr;68(4):415-8. (2013)

Rifabutin
Bassilios N, et al. Pharmacokinetics and dosage adjustment of rifabutin in a haemodialysis patient. *Nephrol Dial Transplant* 2002; 17:531-2. (2003)

Rifampin
Ahn C, et al. The effect of peritoneal dialysis on the plasma and peritonela fluid concentration of isoniazid, pyrazinamide and rifampin. Manuscript reviewed for PDI. (2003)

Rifapentine
Priftin prescribing information (2010)

Rifaximin
Xifaxan prescribing information (2005)

Rilonacept
Arcalyst prescribing information (2009)

Rilpivirine HCl
Edurant prescribing information (2012)
Complera prescribing information (2012)

Riluzole
Micromedex drug evaluation (2003)

Rimantadine
Micromedex drug evaluation (2010)

Ritonavir
Izzedine H, et al. Pharmacokinetics of ritonavir and saquinavir in a haemodialysis patient. *Nephron* 2001; 87:186-187. (2002)
Izzedine H, et al. Pharmacokinetics of ritonavir and nevirapine in peritoneal dialysis. *Nephrol Dial Transplant* 2001; 16:643. (2002)
Giguere P, et al. Pharmacokinetics of darunavir, etravirine, and raltegravir in an HIV-infected patient on haemodialysis. *AIDS* 2009, 23, 740-2. (2011)

Rituximab
Rituxan package insert. (2001)
Jillella AP, et al. Treatment of a patient with end-stage renal disease with rituximab: pharmacokinetic evaluation suggests rituximab is not eliminated by hemodialysis. *Am J Hematol.* 2002; 71:219-22. (2004)

Rivaroxaban
Xarelto prescribing information (2010)

Rizatriptan
Maxalt prescribing information (2011)

Roflumilast
Daliresp prescribing information (2012)

Romidepsin
Istodax prescribing information (2011)

Romiplostim
Nplate prescribing information (2011)

Ropinirol
Requip package insert. (2006)

Ropivacaine
Naropin package insert. (2002)

Rosiglitazone
Aramwit P, et al. Pharmacokinetics of single-dose rosiglitazone in chronic ambulatory peritoneal dialysis patients. *J Clin Pharm Ther* 2008; 33:685-690. (2010)
Avandia prescribing information (2010)

Rosuvastatin
Letter from AstraZeneca professional services (2004)
Crestor prescribing information (2008)

Rotigotine
Neupro prescribing information (2008)
Micromedex drug evaluation (2010)

Ruboxistaurin
Wise S. Effects of chronic renal failure on the pharmacokinetics of ruboxistaurin and its active metabolite 338522. *Clin Pharmacokinet* 2006; 45:297-303. (2008)

Rufinamide
Banzel prescribing information (2009)
Perucca E, et al. Rufinamide: clinical pharmacokinetics and concentration-response relationships in patients with epilepsy. *Epilepsia* 2008; 49:1123-41. (2009)

Ruxolitinib
Jakafi package information (2013)

Sapropterin
Kuvan prescribing information (2011)

Saquinavir
Izzedine H, et al. Pharmacokinetics of ritonavir and saquinavir in a haemodialysis patient. *Nephron* 2001; 87:186-187. (2002)
Taburet A-M, et al. Antiretroviral drug removal by haemodialysis. *AIDS* 2000; 14:902-903. (2001)

Saxagliptin
Onglyza PI (Canada 2010)
Onglyza PI (all versions, 2012)
Boulton DW et al. Influence of renal or hepatic impairment on the pharmacokinetics of saxagliptin. *Clin Pharmacokinet.* 2011 Apr;50(4):253-65. (2013)

Sertindole
Micromedex drug evaluation (2010)
Serdolect PI 2012

Sertraline
Micromedex drug evaluation (2010)

Sevelamer
Renagel package insert (2007)

Sibutramine
Micromedex (1999)
Meridia prescribing information (2010)

Sildenafil
Grossman EB, et al. The pharmacokinetics and hemodynamics of sildenafil citrate in male hemodialysis patients. *Kidney Int* 2004; 66:367. (2005)

Silodosin
Rapaflo prescribing information (2010)

Simethicone
Product information-Micromedex (2002)

Simvastatin
Zocor prescribing information (2010)

Sirolimus
Rapamune prescribing information (2008)
Lunardi G, et al. Temsirolimus in patients with renal cancer on hemodialysis. *J Clin Oncol* 2008; e-pub (2010) (includes sirolimus in paper)

Sitagliptin
Januvia prescribing information (2007)

Sitaxsentan

- Dhaun N, et al. The pharmacokinetic profile of sitaxentan, a selective endothelin receptor antagonist, in varying degrees of renal impairment. *Br J Clin Pharmacol* 2007;July 17 epub. (2008)
- Sodium cromoglycate
Micromedex (Martindale) and drug evaluation. (2002)
- Sodium diatrizoate
Ueda J, et al. Permeability of iodinated and MR contrast media through two types of hemodialysis membrane. *Eur J Radiol.* 1999; 31:76-80. (2002)
- Sodium picosulfate
Prepopik PI (2013)
- Sodium polystyrene sulfonate
Micromedex drug evaluation. (2002)
- Sodium thiosulfate
see Thiosulfate
- Solifenacin
Vesicare package insert (2006)
- Somatropin
Norditropin prescribing information (2008)
Langbakke IH, et al. Pharmacokinetics and pharmacodynamics of growth hormone in patients on chronic haemodialysis compared with matched healthy subjects: an open, nonrandomized, parallel-group trial. *Clin Endocrinology* 2007; e-pub.
- Sorafenib
Nexavar prescribing information (2007)
Kennoli T, et al. Clinical results and pharmacokinetics of sorafenib in chronic hemodialysis patients with metastatic renal cell carcinoma in a single center. *Jpn J Clin Oncol* 2011, 41, 647-55. (2012)
Bobin-Dubigeon C et al. A new rapid and sensitive LC-MS assay for the determination of sorafenib in plasma: application to a patient undergoing hemodialysis. *Ther Drug Monit.* 2011 Dec;33(6):705-10. (2013)
- Spinosaad
Natroba prescribing information (2012)
- Stavudine
Grasela DM, et al. Pharmacokinetics of single-dose oral stavudine in subjects with renal impairment and in subjects requiring hemodialysis. *Antimicrob Agents Chemother.* 2000; 44:2149-2153. (2001)
Taburet A-M, et al. Antiretroviral drug removal by haemodialysis. *AIDS* 2000; 14:902-903. (2001)
- Streptokinase
AHFS.(StatRef) (2007)
- Sufentanil
Micromedex drug evaluation (2010)
- Sulbactam
See ampicillin
- Sulfamethoxazole
Drugdex drug evaluation (2002)

- Walker SE, et al. Trimethoprim-sulfamethoxazole pharmacokinetics during continuous ambulatory peritoneal dialysis (CAPD). *Perit Dial Int* 1989; 9:51-55.
- Sulfasalazine
Azulfidine package insert. (2001)
- Sulfinpyrazone
Bern MM, et al. Plasma levels and effects of sulfinpyrazone in patients requiring chronic hemodialysis. *J Clin Pharmacol.* 1980; Feb-Mar 107-116. (2002)
Micromedex drug evaluation (2010)
- Sunitinib
Sutent prescribing information (2007)
Izzedine H, et al. Pharmacokinetics of sunitinib in hemodialysis. *Ann Oncol* 2009; 20:190-192. (2010)
- Tacrolimus
Prograf prescribing information (2010)
- Tadalafil
Cialis prescribing information (2005)
Forgue TS, et al. Effects of gender, age, diabetes mellitus and renal and hepatic impairment on tadalafil pharmacokinetics. *Br J Clin Pharmacol* 2006. (2007)
- Tafluprost
Zioptan package information (2013)
- Taliglucerase alfa
Elelyso PI (2013)
- Talinolol
Krueger M, et al. Pharmacokinetics of oral talinolol following a single dose and during steady state in patients with chronic renal failure and healthy volunteers. *Int J Clin Pharmacol* 2001; 39:61-66. (2002)
- Tamsulosin
Flomax prescribing information (2010)
Duodart package insert (2012)
- Tapentadol
Nucynta prescribing information (2010)
- Tefibazumab
Hetherington S, et al. Phase I dose escalation study to evaluate the safety and pharmacokinetic profile of tefibazumab in subjects with end-stage renal disease requiring hemodialysis. *Antimicrob Agents Chemother* 2006; 50:3499-3500. (2008)
- Tegafur
Micromedex drug evaluation. (2002)
- Tegaserod
Zhou H, et al. Pharmacokinetics of SDZ HTF919 (HTF) not altered in subjects with severe renal insufficiency requiring hemodialysis. *Clin Pharmacol Ther.* 2002; 65:203 abstract. (2003)
Micromedex drug evaluation (2010)
- Teicoplanin
Qi H et al. Pharmacokinetics of intravenous teicoplanin in peritoneal dialysis patients with respiratory infections. *Perit Dial Int.* 2011 Sep-Oct;31(5):595-7. (2013)
- Telaprevir

Incivek prescribing information (2012)

Telavancin
 Vibativ prescribing information

Telbivudine
 Tyzeka prescribing information (2007)
 Zhou X-J, et al. Pharmacokinetics of telbivudine in subjects with various degrees of renal impairment. *Antimicrob Agents Chemother.* 2007; 51:4231-35. (2008)

Telmisartan
 Stangier J, et al. Pharmacokinetics of single-dose telmisartan 120 mg given during and between hemodialysis in subjects with severe renal insufficiency: comparison with healthy volunteers. *J Clin Pharmacol* 2000; 40:1365-1372. (2002)
 Twynsta PI (2012)

Temazepam
 Micromedex drug evaluation (2010)

Temsirolimus
 Torisel prescribing information (2008)
 Lunardi G, et al. Temsirolimus in patients with renal cancer on hemodialysis. *J Clin Oncol* 2008; e-pub (2010)

Tenecteplase
 PDR entry for TNKase I.V. (2002)

Tenofovir
 Izzedine H, et al. Pharmacokinetics of tenofovir in haemodialysis. *Nephrol Dial Transplant.* 2003; 18:1931-3. (2004)
 Kearney BP, et al. Pharmacokinetics and dosing recommendations of tenofovir disoproxil fumarate in hepatic or renal impairment. *Clin Pharmacokinet* 2006; 45:1115-24. (2008)

Tenoxicam
 Al-Ghamdi MS, et al. The effect of haemodialysis on the pharmacokinetics of tenoxicam in patients with end-stage renal disease. *Eur J Clin Pharmacol.* 1992; 43:197-199. (2002)

Terazosin
 Micromedex drug evaluation (2010)

Terbinafine
 Micromedex (2008)

Terlipressin
 Glypressin PI (new for Australia) (2013)

Testosterone
 Singh AB, et al. Pharmacokinetics of a transdermal testosterone system in men with end stage renal disease receiving maintenance hemodialysis and healthy hypogonadal men. *J Clin Endocrinol Metab* 2001; 86: 2437-2445. (2002)
 Micromedex drug evaluation. (2010)

Thalidomide
 Eriksson T, et al. Pharmacokinetics of thalidomide in patients with impaired renal function and while on and off dialysis. *J Pharm Pharmacol* 2003; 55:1701. (2005)

Thiabendazole

Bauer LA, et al. The pharmacokinetics of thiabendazole and its metabolites in an anephric patient undergoing hemodialysis and hemoperfusion. *J Clin Pharmacol.* 1982; 22:276-280. (2002)

Thiamazole (see methimazole) (2008)

Thiamine
Niwa T, et al. Plasma thiamine levels with hemodialysis. *JAMA* 1971; 218:885-6. (2003)

Thioridazine
Micromedex drug evaluation (2010)

Thiosulfate sodium
Fares S, et al. Sodium thiosulfate pharmacokinetics in hemodialysis patients and healthy volunteers. *Clin J Am Soc Nephrol* 2011, 6, 1447-55. (2012)

Thrombin alfa
Recothrom PI (2011)

Thyrotropin alfa
Thyrogen package insert (2007)

Tiagabine
Micromedex drug evaluation (2010)

Tiaprofenic acid
Micromedex drug evaluation. (2002)

Ticagrelor
Brilinta prescribing information (2012)

Ticlopidine
Ticlid prescribing information (2010)

Tigecycline
Meagher AK, et al. The pharmacokinetic and pharmacodynamic profile of tigecycline. *Clin Infect Dis* 2005; 41:S333-40. (2006)
Troy SM, et al. The effects of renal disease on the pharmacokinetics of tigecycline (GAR-936). Abstract A-22. ICAAC, September, 2003, page 5. (2006)
Tygacil package insert (2006)

Tilidine
Seiler KU, et al. Pharmacokinetics of tilidine in terminal renal failure. *J Clin Pharmacol* 2001; 41:79-84. (2002)

Tinzaparin
Innohep package insert. (2001)

Tipranavir
Aptivus package insert (2006)

Tirilazad
Micromedex drug evaluation. (2002)

Tocilizumab
Actemra prescribing information

Tolcapone
Tasmar package insert. (2002)

Tolmetin
Micromedex drug evaluation. (2010)

Tolterodine

Detrol LA entry in PDR (2006)

Tolvaptan
Samsca prescribing information (2010)

Topiramate
Topamax prescribing information (2009)

Topotecan
Herrington JD, et al. Effect of hemodialysis on topotecan disposition in a patient with severe renal dysfunction. *Cancer Chemother Pharmacol* 2001; 47:89-93. (2002)
Iacono LC, et al. Topotecan disposition in an anephric child. *J Pediatr Hematol Oncol* 2004; 26:596. (2005)

Toremifene
PDR entry for Fareston. (2002)

Torsemide
Micromedex (2008)

Tositumomab
Bexxar prescribing information (2006)

Tosufloxacin
Niki Y. Pharmacokinetics and safety assessment of tosufloxacin tosilate. *J Infect Chemother* 2002; 8:1-18. (2003)

Trabectedin
Yondelis PI
Thariat J, et al. Pharmacokinetics of trabectedin on hemodialysis: an application for the management of cancer patients with end-stage renal disease. *Cancer Chemother Pharmacol* 2011, doi 10.1007/s00280-011-1718-5 (2012)

Tramadol
Izzedine H, et al. Pharmacokinetics of tramadol in a hemodialysis patient. *Nephron*. 2002; 92:755-6. (2004)

Trastuzumab
Herceptin package insert. (2002)

Treprostinil
Remodulin product information (2006)
Remodulin product information, revised (2006)

Trifluoperazine
Micromedex drug evaluation (2010)

Trimetrexate
Micromedex drug evaluation (2010)

Trimipramine
Micromedex drug evaluation (2010)

Trisodium citrate
Duraloc package insert (2012)

Tropisetron
Micromedex drug evaluation. (2010)

Ulipristal acetate
Ella prescribing information (2011)

Ursodiol
Micromedex (2007)

- Ustekinumab
Stelara prescribing information (2011)
- Valacyclovir
Izzedine H, et al. Neurotoxicity of valacyclovir in peritoneal dialysis: a pharmacokinetic study. *Am J Nephrol* 2001; 21:162-164. (2002)
- Valdecoxib
Bextra package insert. (2002)
- Valganciclovir
Same data as ganciclovir from 2001 edition (prodrug). (2002)
Czock D, et al. Pharmacokinetics of valganciclovir and ganciclovir in renal impairment. *Clin Pharmacol Ther.* 2002; 72:142-50. (2004)
- Valproic acid
Guillaume CPE, et al. Successful use of hemodialysis in acute valproic acid intoxication. *J Toxicol Clin Toxicol.* 2004; 42:335-6. (2005)
Singh SM, et al. Extracorporeal management of valproic acid overdose: a large regional experience. *J Nephrol* 2004; 17:43-49. (2005)
Thanacoody RHK. Extracorporeal elimination in acute valproic acid poisoning. *Clin Toxicol.* 2009;47:609-616. (2011)
- Valsartan
Brookman L, et al. The PK of valsartan in patients with renal failure undergoing hemodialysis. *Clin Pharmacol Ther.* (Abstract) 2000; page 124. (2001)
Exforge HCT package insert (2012)
- Vancomycin
Scott MK, et al. Effects of dialysis membrane on intradialytic vancomycin administration. *Pharmacotherapy.* 1997; 17:256-262. (2001)
Foote EF, et al. Pharmacokinetics of vancomycin when administered during high flux hemodialysis. *Clin Nephrol.* 1998; 50:51-55. (2000)
Touchette MA, et al. Vancomycin removal by high-flux polysulfone hemodialysis membranes in critically ill patients with end-stage renal disease. *Am J Kidney Dis.* 1995; 26:469-474. (2000)
Decker BS, et al. Vancomycin pharmacokinetics and pharmacodynamics during short daily hemodialysis. *Clin J Am Soc Nephrol* 2010, 5, 1981-7. (2012)
Montanes Pauls B, et al. Vancomycin pharmacokinetics during continuous ambulatory peritoneal dialysis in patients with peritonitis. *Eur J Pharm Sci* 2011, 43, 212-6. (2012)
Sombolos KI, et al. Subtherapeutic serum vancomycin concentrations during on-line hemodialfiltration. *ASAIO J* 2011, 57: 507-10. (2013)
- Vandetanib
Caprelsa prescribing information (2012)
- Varenicline
Chantix prescribing information (2007)
- Velaglucerase
Vpriv prescribing information (2011)
- Velosulin
Same data as insulin from 2001 edition. (2002)
- Vemurafenib
Zelboraf prescribing information (2012)

Venlafaxine
Effexor prescribing information. (2010)

Vilazodone HCl
Viibryd prescribing information (2012)

Vildagliptin
Galvus prescribing information (2011)
Galvumet PI (2012)

Vinflunine
Javlor PI (2013)

Vismodegib
Erivedge package information (2013)

Voriconazole
Vfend package insert (2003, 2010)
Peng LW, et al. Pharmacokinetics of single, oral-dose voriconazole in peritoneal dialysis patients. *Am J Kidney Dis* 2005; 45:162-166. (2006)
Burkhardt O. Sulphobutylether- β -cyclodextrin accumulation in critically ill patients with acute kidney injury treated with intravenous voriconazole under extended daily dialysis. *Int J of Antimicrob Agents*. 2010; 36: 90–98. (2011)

Vorinostat
Zolinza prescribing information (2011)

Zafirlukast
Accolate prescribing information (2010)

Zileuton
Awni WM, et al. Pharmacokinetics of zileuton and its metabolites in patients with renal impairment. *J Clin Pharmacol*. 1997; 37:395-404. (2001)

Ziprasidone
Aweeka F, et al. The pharmacokinetics of ziprasidone in subjects with normal and impaired renal function. *Br J Clin Pharmacol*. 2000; 49 (Suppl 1): 27S-33S. (2001 and 2008)

Zolmitriptan
Zomig prescribing information. (2010)

Zolpidem
Zolpimist prescribing information. (2010)

Zonisamide
Ijiri Y, et al. Dialyzability of the antiepileptic drug zonisamide in patients undergoing hemodialysis. *Epilepsia* 2004; 45:924-927. (2005)
Zonegran PI (2012)