

TABLE 1 Examples of Marketed Products in Dual Chamber Packages

| Drug product | Indication | Company | Primary package | Device information and/or notes |
|---|---|-----------------------------|------------------|--|
| Cardizem Lyo-Ject (diltiazem hydrochloride) | Atrial fibrillation | Biovail Pharmaceuticals | DCS, 1 mL | No device; Lyo-Ject DCS from Vetter; removed from market in 2007 |
| Caverject (alprostadil) | Erectile dysfunction | Pfizer | DCC, 0.6 mL | CAVERJECT IMPULSE; disposable, variable dose pen injector |
| Edex (alprostadil) | Erectile dysfunction | Schwarz Pharma | DCC, 0.6 mL | Edex Injection Device; reusable, variable dose pen injector |
| Genotropin (recombinant human growth hormone) | Growth hormone deficiency, Prader-Willi syndrome, Turner syndrome, short for gestational age | Pfizer | DCC, 1 mL | Genotropin Pen; reusable, variable dose pen injector; Ypsomed |
| Humatrope (recombinant human growth hormone) | Growth hormone deficiency, Turner syndrome, idiopathic short stature, short stature homeobox gene | Eli Lilly | DCS, 0.25 mL | No device; Miniquick DCS from Pfizer |
| Lupron depot (leuprolide acetate) | Prostate cancer | TAP Pharmaceuticals, Inc | DCC | Hematro Pen or Hematro Pen 3; reusable, variable dose pen injectors; Ypsomed |
| NeoRecormon (Epoetin Beta) | Anemia | Roche | DCC | No device; Atrix technology for controlled release |
| Peg-Intron (pegylated interferon $\alpha 2$) | Hepatitis C | Schering | DCC | Reco-Pen; reusable, variable dose pen injector; Ypsomed |
| Preatact (parathyroid hormone) | Osteoporosis | Nycomed, NPS Pharmaceutical | DCC, 3 mL | RediPen (based on BD Liquid Dry Injector Pen); disposable, single use pen injector |
| Saizen (recombinant human growth hormone) | Growth hormone deficiency | Merck Serono | DCC | Preatact Pen; reusable, fixed dose pen injector; Ypsomed |
| Solu-Cortef (hydrocortisone sodium succinate) | Acute corticosteroid therapy | Pfizer | DCV (Act-O-Vial) | One click Pen; reusable, variable dose pen; Haselmeier |
| Solu-Medrol (methylprednisolone sodium succinate) | Acute corticosteroid therapy | Pfizer | DCV (Act-O-Vial) | No device |

Abbreviations: DCC, dual chamber cartridge; DCS, dual chamber syringe; DCV, dual chamber vial.