

CHAPTER ONE: INTRODUCTION.....	1
STUDY GOAL AND OBJECTIVES .....	1
REASONS FOR DOING THE STUDY .....	1
INTENDED AUDIENCE.....	2
SCOPE OF REPORT .....	2
INFORMATION SOURCES.....	3
ANALYST CREDENTIALS.....	3
RELATED BCC REPORTS .....	3
BCC ONLINE SERVICES.....	4
DISCLAIMER .....	4
 CHAPTER TWO: SUMMARY.....	 5
SUMMARY.....	5
<i>SUMMARY TABLE THE U.S. MARKET FOR RENAL FAILURE</i>	
<i>TREATMENT, THROUGH 2014 (\$ MILLIONS)</i> .....	6
<i>SUMMARY FIGURE U.S. MARKET FOR RENAL FAILURE</i>	
<i>TREATMENT, 1996–2014 (\$ MILLIONS)</i> .....	7
 CHAPTER THREE: OVERVIEW .....	 8
KIDNEY FUNCTION .....	8
KIDNEY DISEASE.....	9
<i>TABLE 1 DISEASES LEADING TO RENAL FAILURE</i> .....	10
DETECTING KIDNEY DISEASE .....	10
TYPICAL TESTS.....	10
PATIENT POPULATIONS.....	11
<i>TABLE 2 ESTIMATED ARF, CKD, AND ESRD POPULATIONS,</i>	
<i>INCLUDING TRANSPLANT RECIPIENTS AND ROUTINE</i>	
<i>DIALYSIS PATIENTS, 1996-2009</i> .....	12
<i>FIGURE 1 ESTIMATED ARF, CKD, AND ESRD POPULATIONS,</i>	
<i>INCLUDING TRANSPLANT RECIPIENTS AND ROUTINE</i>	
<i>DIALYSIS PATIENTS, 1996-2009</i> .....	12
HOSPITALIZATIONS WITH RENAL FAILURE LISTED AS A	
DIAGNOSIS.....	12
<i>FIGURE 2 AGE-SPECIFIC HOSPITALIZATION RATES* FOR KIDNEY</i>	
<i>DISEASE,† BY AGE GROUP -- NATIONAL HOSPITAL DISCHARGE</i>	
<i>SURVEY, UNITED STATES, 1980-2005</i> .....	13
<i>FIGURE 3 AGE-ADJUSTED HOSPITALIZATION RATES FOR KIDNEY</i>	
<i>DISEASE BY TYPE, 1980-2005</i> .....	14
<i>TABLE 3 NUMBER OF HOSPITALIZATIONS AND AGE-ADJUSTED</i>	
<i>HOSPITALIZATION RATES FOR KIDNEY DISEASE, BY SEX AND</i>	
<i>YEAR, NATIONAL HOSPITAL DISCHARGE SURVEY, 1980–2005</i> .....	15
<i>FIGURE 4 NUMBER OF HOSPITALIZATIONS FOR KIDNEY</i>	
<i>DISEASE, BY SEX AND YEAR, NATIONAL HOSPITAL DISCHARGE</i>	
<i>SURVEY, 1980–2005</i> .....	16
WHO PAYS THE COSTS OF KIDNEY DISEASE? .....	16

WHAT MEDICARE COVERS .....	17
MEDICARE'S ESRD PROGRAM .....	18
Breakdown of ESRD Population by Payer .....	19
CHAPTER FOUR: ACUTE KIDNEY FAILURE.....	20
INCIDENCE OF ACUTE KIDNEY FAILURE .....	20
CAUSES OF ACUTE KIDNEY FAILURE .....	21
PRERENAL FAILURE .....	21
RENAL DAMAGE .....	21
POSTRENAL FAILURE.....	22
ACUTE KIDNEY FAILURE TREATMENT.....	23
COSTS OF TREATING ACUTE RENAL FAILURE .....	23
<i>TABLE 4 BREAKDOWN OF AVERAGE ARF TREATMENT COSTS, BY</i>	
<i>SUBCATEGORY OF CARE (\$)</i> .....	24
<i>FIGURE 5 BREAKDOWN OF ARF TREATMENT COSTS, BY</i>	
<i>SUBCATEGORY OF CARE (\$)</i> .....	24
PHARMACEUTICALS .....	25
FUROSEMIDE.....	25
DOPAMINE.....	25
EPINEPHRINE.....	26
RENAL RELACEMENT THERAPY.....	26
RESEARCH SUGGESTS NO SUPERIORITY OF RRT MODES	
IN TREATING ARF .....	27
THE U.S. MARKET FOR TREATING ACUTE RENAL FAILURE.....	27
PHARMACEUTICALS IN ARF TREATMENT .....	28
RRT IN ARF TREATMENT .....	28
<i>TABLE 5 U.S MARKET FOR ACUTE RENAL FAILURE TREATMENT,</i>	
<i>THROUGH 2014 (\$ MILLION)</i> .....	29
<i>FIGURE 6 U.S. MARKET FOR ACUTE RENAL FAILURE</i>	
<i>TREATMENT, 1996–2014 (\$ MILLION)</i> .....	30
CHAPTER FIVE: CHRONIC KIDNEY FAILURE .....	31
INCIDENCE OF CHRONIC KIDNEY FAILURE.....	31
CAUSES OF CHRONIC KIDNEY FAILURE .....	31
<i>TABLE 6 PRIMARY CAUSES OF KIDNEY FAILURE (% OF PATIENTS)</i> .....	32
<i>FIGURE 7 PRIMARY CAUSES OF KIDNEY FAILURE (% OF</i>	
<i>PATIENTS)</i> .....	33
<i>FIGURE 8 CKD PREDICTORS IN THE U.S. POPULATION AGED 20</i>	
<i>AND OLDER</i> .....	34
CKD STAGES .....	34
<i>TABLE 7 STAGES OF CHRONIC KIDNEY DISEASE</i> .....	35
STAGE 1 .....	35
STAGE 2 .....	35
STAGE 3 .....	36
STAGE 4.....	36

STAGE 5 (ESRD).....	36
NUMBER OF INDIVIDUALS WITH CKD .....	37
TABLE 8 PATIENTS WITH CKD AND AWARENESS OF THE DISEASE, BY STAGE, 2009 (NUMBER AND %)	37
FIGURE 9 PATIENTS WITH CKD AND AWARENESS OF THE DISEASE, BY STAGE 2009 (%).....	37
CHARACTERISTICS OF THE CKD PATIENT POPULATION.....	38
TABLE 9 CKD PATIENT CHARACTERISTICS (COLUMN %).....	38
TREATMENT GOALS .....	38
ESRD .....	39
TABLE 10 ESRD TREATMENT, BY MODALITY (PERCENTAGE AND NUMBER OF PATIENTS).....	40
FIGURE 10 ESRD TREATMENT, BY MODALITY (PERCENTAGE OF PATIENTS).....	40
TABLE 11 DIALYSIS FOR ESRD, BY TREATMENT MODALITY, 2009 .....	41
FIGURE 11 DIALYSIS FOR ESRD, BY TREATMENT MODALITY, 2009 (%).....	41
COSTS OF CHRONIC KIDNEY DISEASE.....	41
TABLE 12 INPATIENT/OUTPATIENT AND PHYSICIAN / SUPPLIER NET COSTS FOR CKD (\$, PER PATIENT PER MONTH, 2006) .....	42
TABLE 12 (CONTINUED).....	43
FIGURE 12 PPPM EXPENDITURES FOR CKD PATIENTS, 1993–2006 (MEDICARE, MEDICARE/MEDICAID, MEDSTAT [EMPLOYER PAID INSURANCE]).....	44
THE U.S. MARKET FOR TREATING CHRONIC KIDNEY FAILURE AND END-STAGE RENAL DISEASE .....	45
TABLE 13 THE U.S. MARKET FOR CKD/ESRD TREATMENT BY TYPE, 1996–2014 (\$ MILLION).....	46
FIGURE 13 THE U.S. MARKET FOR CHRONIC RENAL FAILURE TREATMENT BY TYPE, 1996-2014 (\$ MILLION) .....	46
CHAPTER SIX: PHARMACEUTICALS USED IN RENAL FAILURE TREATMENT .....	47
TABLE 14 PHARMACEUTICALS USED IN RENAL FAILURE TREATMENT BY TYPE AND MANUFACTURER.....	47
TABLE 14 (CONTINUED).....	48
ANTIHYPERTENSIVES .....	48
ACE INHIBITORS .....	48
TABLE 15 COMMONLY PRESCRIBED ACE INHIBITORS: BRAND NAME, GENERIC NAME AND MANUFACTURER.....	49
ANGIOTENSIN RECEPTOR BLOCKERS.....	49
TABLE 16 COMMONLY PRESCRIBED ANGIOTENSIN RECEPTOR BLOCKERS BRAND NAME, GENERIC NAME AND MANUFACTURER.....	50
BETA-BLOCKERS.....	50

<i>TABLE 17 COMMONLY PRESCRIBED BETA BLOCKERS: BRAND NAME, GENERIC NAME AND MANUFACTURER.....</i>	<i>50</i>
CALCIUM CHANNEL BLOCKERS .....	51
<i>TABLE 18 COMMONLY PRESCRIBED CALCIUM CHANNEL BLOCKERS.....</i>	<i>51</i>
DIRECT RENIN INHIBITORS .....	51
CHOLESTEROL MANAGEMENT MEDICATIONS .....	52
STATINS .....	52
<i>TABLE 19 COMMONLY PRESCRIBED STATIN DRUGS.....</i>	<i>53</i>
BILE ACID SEQUESTRANTS .....	53
<i>TABLE 20 COMMONLY-PRESCRIBED BILE ACID SEQUESTRANTS.....</i>	<i>53</i>
CHOLESTEROL ABSORPTION INHIBITORS .....	54
FIBRATES .....	54
<i>TABLE 21 COMMONLY PRESCRIBED FIBRATES .....</i>	<i>54</i>
NIACIN.....	55
COMBINATION MEDICATIONS.....	55
DIURETICS .....	55
THIAZIDE DIURETICS .....	56
LOOP DIURETICS .....	56
POTASSIUM-SPARING DIURETICS .....	56
<i>TABLE 22 COMMONLY PRESCRIBED DIURETICS: BRAND NAME, GENERIC NAME, TYPE, AND MANUFACTURER .....</i>	<i>57</i>
ERYTHROPOIESIS-STIMULATING AGENTS .....	58
<i>TABLE 23 COMMONLY PRESCRIBED ERYTHROPOIESIS-STIMULATING AGENT .....</i>	<i>58</i>
IRON.....	58
GLUCOSE MANAGEMENT .....	59
<i>TABLE 24 COMMONLY PRESCRIBED GLUCOSE MANAGEMENT DRUGS.....</i>	<i>60</i>
<i>TABLE 24 (CONTINUED).....</i>	<i>61</i>
OTHER .....	61
<i>TABLE 25 OTHER COMMONLY PRESCRIBED DRUGS .....</i>	<i>61</i>
<i>TABLE 25 (CONTINUED).....</i>	<i>62</i>
HORMONES .....	62
ACTIVE VITAMIN D .....	62
CALCIUM-LOWERING DRUGS .....	62
ADDITIONAL MEDICATIONS FOR DIALYSIS PATIENTS .....	63
Heparin .....	63
Citrate Anticoagulant.....	64
MEDICATIONS FOR CKD PATIENTS ON PD.....	64
INTRAPERITONEAL DOSING OF MEDICATIONS .....	64
DRUGS USED IN CONJUNCTION WITH KIDNEY TRANSPLANTATION.....	65
INDUCTION DRUGS .....	65

IMMUNOSUPPRESSANT AGENTS.....	66
TABLE 26 COMMONLY PRESCRIBED IMMUNOSUPPRESSANTS.....	67
TABLE 27 IMMUNOSUPPRESSION MAINTENANCE REGIMEN AT DISCHARGE AND 1 YEAR AFTER TRANSPLANT, 2006 .....	68
TABLE 28 IMMUNOSUPPRESSION DRUG USE, INDUCTION DRUGS, AT DISCHARGE, AT 1 YEAR POST-TRANSPLANT, 2005 AND 2006 (%).....	69
PHARMACEUTICALS USED IN ACUTE RENAL FAILURE .....	69
PHARMACEUTICALS USED IN CHRONIC RENAL FAILURE.....	70
TABLE 29 PREVALENCE OF HYPERTENSION AND DYSLIPIDEMIA BY CKD STAGE (%) .....	71
TABLE 30 AWARENESS, TREATMENT AND CONTROL OF HYPERTENSION, DYSLIPIDEMIA, AND DIABETES BY CKD STAGE (%).....	71
TABLE 30 (CONTINUED).....	72
COSTS .....	72
TABLE 31 COSTS OF COMMONLY USED PRESCRIPTION DRUGS FOR TREATING RENAL FAILURE AND ASSOCIATED DISEASES .....	73
TABLE 31 (CONTINUED).....	74
THE U.S. MARKET FOR PHARMACEUTICALS USED IN RENAL FAILURE TREATMENT .....	74
THE MARKET FOR MEDICATIONS TO TREAT DISEASES UNDERLYING CKD .....	75
THE MARKET FOR PHARMACEUTICALS USED IN ESRD TREATMENT FOR IN-CENTER DIALYSIS PATIENTS .....	75
CMS' New Bundled Dialysis Payment .....	76
THE MARKET FOR PHARMACEUTICALS USED FOR ESRD PATIENTS DIALYZING AT HOME.....	77
THE MARKET FOR PHARMACEUTICALS USED IN TREATING ARF .....	77
THE MARKET FOR PHARMACEUTICALS USED IN KIDNEY TRANSPLANTATION.....	78
TABLE 32 THE U.S. MARKET FOR PHARMACEUTICALS USED IN RENAL FAILURE TREATMENT BY TYPE, THROUGH 2014 (\$ MILLIONS).....	79
FIGURE 14 THE U.S. MARKET FOR PHARMACEUTICALS USED IN RENAL FAILURE TREATMENT BY TYPE, 1996-2014 (\$ MILLIONS) .....	79
CHAPTER SEVEN: RENAL REPLACEMENT PRODUCTS AND THERAPIES USED IN KIDNEY FAILURE TREATMENT .....	80
HEMODIALYSIS .....	80
THE HEMODIALYSIS SYSTEM.....	80
TABLE 33 HEMODIALYSIS SYSTEM MARKET SHARE BY MAUFACTURER, 2009 (%).....	81

<i>FIGURE 15 HEMODIALYSIS SYSTEM MARKET BY MAUFACTURER, 2009 (%)</i> .....	81
ACUTE CARE DIALYSIS EQUIPMENT .....	82
<i>TABLE 34 THE CRRT SYSTEM MARKET BY MANUFACTURER, 2009</i> .....	82
<i>TABLE 35 DIALYSIS SYSTEMS AND MANUFACTURERS (HD, PD, CRRT)</i> .....	83
DIALYZERS .....	83
<i>TABLE 36 DIALYZER PRODUCTS, MANUFACTURERS, MATERIAL, AND TYPE</i> .....	84
HEMOFILTERS .....	84
<i>TABLE 37 HEMODIALYZERS, HEMOFILTERS MARKET SHARE, 2009 (%)</i> .....	85
<i>FIGURE 16 HEMODIALYZERS, HEMOFILTERS MARKET SHARE, 2009 (%)</i> .....	85
MODES OF HEMODIALYSIS .....	86
Hemofiltration .....	86
Hemodiafiltration .....	86
Hemodiafiltration (Continued).....	87
<i>FIGURE 17 INTERMITTENT RENAL THERAPIES</i> .....	88
MEASURING DIALYZER PERFORMANCE.....	89
DIALYZER REUSE.....	89
DIALYSATE .....	90
Sodium Citrate-Containing Dialysate .....	91
<i>TABLE 38 DIALYSATE PRODUCTS FOR HD, PD, AND CRRT</i> .....	91
<i>TABLE 38 (CONTINUED)</i> .....	92
<i>TABLE 39 DIALYSATE MARKET BY MANUFACTURER RANK, 2009</i> .....	92
DIALYSIS EQUIPMENT COSTS .....	92
<i>TABLE 40 COSTS FOR COMMON DIALYSIS EQUIPMENT, HD, PD, CRRT (\$)</i> .....	93
THE U.S. MARKET FOR DIALYSIS SYSTEMS AND MAJOR CONSUMABLES.....	93
DIALYSIS MACHINES .....	93
<i>TABLE 41 THE U.S. MARKET FOR DIALYSIS SYSTEMS BY TYPE, THROUGH 2014 (\$ MILLION)</i> .....	94
<i>FIGURE 18 THE U.S. MARKET FOR DIALYSIS SYSTEMS BY TYPE, 1996-2014 (\$ MILLION)</i> .....	95
CONSUMABLES .....	95
<i>TABLE 42 THE U.S. MARKET FOR MAJOR DIALYSIS CONSUMABLES BY TYPE, THROUGH 2014 (\$ MILLION)</i> .....	96
<i>FIGURE 18 THE U.S. MARKET FOR MAJOR DIALYSIS CONSUMABLES BY TYPE, 1996-2014 (\$ MILLION)</i> .....	96
Dialyzers .....	96
Dialysate .....	97
PERITONEAL DIALYSIS .....	98

MODES OF PERITONEAL DIALYSIS .....	99
Continuous Ambulatory Peritoneal Dialysis.....	99
<i>FIGURE 19 CONTINUOUS AMBULATORY PERITONEAL DIALYSIS</i> .....	<i>100</i>
Continuous Cycler-Assisted Peritoneal Dialysis.....	100
Nocturnal Intermittent Peritoneal Dialysis.....	101
Tidal Peritoneal Dialysis.....	101
Dialysate for PD .....	102
PERITONEAL DIALYSIS EQUIPMENT MANUFACTURERS .....	102
<i>TABLE 43 PERITONEAL DIALYSIS SYSTEMS, TYPE AND</i> <i>MANUFACTURER</i> .....	<i>102</i>
<i>TABLE 44 PERITONEAL DIALYSIS EQUIPMENT MARKET SHARE</i> <i>BY TYPE, 2009 (%)</i> .....	<i>103</i>
<i>FIGURE 20 PERITONEAL DIALYSIS EQUIPMENT MARKET BY</i> <i>TYPE, 2009 (%)</i> .....	<i>103</i>
<i>TABLE 45 PERITONEAL DIALYSIS EQUIPMENT MARKET SHARE</i> <i>BY MANUFACTURER, 2009 (%)</i> .....	<i>104</i>
<i>FIGURE 21 PERITONEAL DIALYSIS EQUIPMENT MARKET SHARE</i> <i>BY MANUFACTURER, 2009 (%)</i> .....	<i>104</i>
CONTINUOUS RENAL REPLACEMENT THERAPIES.....	104
SCUF.....	105
CVVH.....	105
CVVHD .....	105
CVVHD (Continued).....	106
<i>FIGURE 22 CONTINUOUS RENAL THERAPIES (SCUF, CVVD,</i> <i>CVVHD)</i> .....	<i>107</i>
CVVHDF.....	108
<i>FIGURE 23 CONTINUOUS VENO-VENOUS HEMODIAFILTRATION</i> .....	<i>108</i>
DIALYSIS SERVICES .....	109
<i>TABLE 46 HEMODIALYSIS TREATMENT BY PROVIDER TYPE, 1990–</i> <i>2009 (%)</i> .....	<i>109</i>
<i>FIGURE 24 HEMODIALYSIS TREATMENT BY PROVIDER TYPE,</i> <i>1990–2009 (%)</i> .....	<i>109</i>
<i>TABLE 47 U.S. DIALYSIS PROVIDERS, BY TYPE, 2008</i> .....	<i>110</i>
<i>TABLE 47 (CONTINUED)</i> .....	<i>111</i>
<i>TABLE 47 (CONTINUED)</i> .....	<i>112</i>
<i>TABLE 48 MARKET SHARE, HEMODIALYSIS PROVIDERS, 2009 (%)</i> .....	<i>112</i>
<i>FIGURE 25 MARKET SHARE, HEMODIALYSIS PROVIDERS (%)</i> .....	<i>113</i>
THE U.S. MARKET FOR RENAL REPLACEMENT THERAPIES USED IN TREATING KIDNEY FAILURE.....	113
HEMODIALYSIS FOR TREATING CKD.....	113
Hemodialysis for Treating CKD (Continued).....	114
RENAL REPLACEMENT THERAPIES FOR TREATING ARF .....	115
<i>TABLE 49 THE U.S. MARKET FOR DIALYSIS THERAPY BY TYPE,</i> <i>THROUGH 2014 (\$ MILLION)</i> .....	<i>115</i>

<i>FIGURE 26 THE U.S. MARKET FOR DIALYSIS THERAPY BY TYPE, 1996 TO 2014 (\$ MILLION)</i> .....	116
CHAPTER EIGHT: SURGICAL PROCEDURES USED IN RENAL	
FAILURE TREATMENT .....	117
VASCULAR ACCESS PROCEDURES .....	117
AV FISTULA .....	117
<i>FIGURE 27 FOREARM AV FISTULA</i> .....	118
AV GRAFT .....	118
<i>FIGURE 28 A TYPE OF AV GRAFT</i> .....	119
VENOUS CATHETER .....	119
<i>FIGURE 29 VENOUS CATHETER</i> .....	120
ACCESS REPLACEMENT/REPAIR.....	120
VASCULAR ACCESS MARKET BY TYPE .....	121
PERITONEAL DIALYSIS CATHETER .....	122
<i>FIGURE 30 TENCKHOFF CATHETERS</i> .....	122
PD CATHETERIZATION COSTS.....	122
KIDNEY TRANSPLANTATION.....	123
DECEASED DONORS.....	123
LIVING DONORS .....	123
THE TRANSPLANT PROCEDURE.....	124
Donor.....	124
Recipient .....	124
Compatibility .....	125
Post Surgery.....	125
THE U.S. MARKET FOR SURGICAL PROCEDURES USED IN	
TREATING RENAL FAILURE .....	126
THE U.S. MARKET FOR SURGICAL ...(CONTINUED).....	127
<i>TABLE 50 THE U.S. MARKET FOR SURGICAL PROCEDURES USED IN RENAL FAILURE TREATMENT BY TYPE, THROUGH 2014 (\$ MILLION)</i> .....	128
<i>FIGURE 31 THE U.S. MARKET FOR SURGICAL PROCEDURES USED IN RENAL FAILURE TREATMENT BY TYPE, 1996-2014 (\$ MILLION)</i> .....	128
CHAPTER NINE: THE INTERNATIONAL MARKET .....	129
CKD .....	129
ESRD .....	129
<i>TABLE 51 GLOBAL INCIDENCE OF END-STAGE RENAL DISEASE, 2006 (PER MILLION POPULATION)</i> .....	130
<i>TABLE 51 (CONTINUED)</i> .....	131
ESRD Treatment .....	131
<i>TABLE 52 GLOBAL PATIENT DISTRIBUTION BY TYPE OF DIALYSIS, 2006 (%)</i> .....	132



<i>TABLE 53 GLOBAL TRANSPLANT RATES, 2006 (PER MILLION POPULATION)</i> .....	133
<i>TABLE 53 (CONTINUED)</i> .....	134
ARF .....	134
MARKET .....	134
MARKET (CONTINUED).....	135
CHAPTER TEN: INDUSTRY STRUCTURE .....	136
<i>TABLE 54 LEADING PRODUCT AND THERAPY PROVIDERS FOR RENAL FAILURE TREATMENT IN THE U.S., 2009</i> .....	136
PHARMACEUTICALS MANUFACTURERS.....	137
DIALYSIS EQUIPMENT MAKERS .....	137
MANUFACTURERS OF DIALYSIS CONSUMABLES.....	138
THERAPIES.....	139
DIALYSIS .....	139
SURGERY .....	140
UNOS/OPTN.....	140
COMPANY PROFILES .....	141
ABBOTT LABORATORIES.....	141
AMAG PHARMACEUTICALS .....	141
AMERICAN REGENT INC. ....	142
AMERICAN RENAL ASSOCIATES, INC. (ARA) .....	143
AMERICAN VASCULAR DIALYSIS ACCESS CENTERS .....	143
AMGEN .....	143
ASAHI KASEI KURARAY MEDICAL CO.....	144
ASTELLAS PHARMA U.S., INC.....	145
ASTRAZENECA PLC.....	145
B.BRAUN MEDICAL INC.....	146
BARD ACCESS SYSTEMS, INC.....	146
BAYER HEALTHCARE.....	147
BAXTER INTERNATIONAL.....	147
BIOVAIL CORP.....	148
BOEHRINGER INGELHEIM .....	149
BRISTOL MYERS SQUIBB COMPANY .....	149
CANTEL MEDICAL.....	150
CENTERS FOR DIALYSIS CARE .....	151
DAVITA, INC. ....	151
DIALYSIS CLINIC, INC. (DCI).....	151
DIALYSIS CORP. OF AMERICA (DCA).....	152
DIVERSIFIED SPECIALTY INSTITUTES (DSI) .....	152
ELI LILLY AND CO.....	153
FOREST PHARMACEUTICALS.....	153
FRESENIUS GROUP .....	153
Fresenius Group (Continued).....	154
Renal Solutions, Inc.....	155

GAMBRO AB.....	155
GENENTECH INC. ....	156
GENZYME CORP. ....	156
GLAXOSMITHKLINE PLC.....	157
GREENFIELD HEALTH SYSTEMS .....	157
INNOVATIVE DIALYSIS SYSTEMS INC. (IDS) .....	158
JOHNSON & JOHNSON.....	158
KING PHARMACEUTICALS.....	159
KIDNEY CENTER, INC. ....	159
LIBERTY DIALYSIS.....	160
MAQUET CARDIOVASCULAR.....	160
MEDCOMP .....	161
MEDIGROUP INC. ....	161
MEDICINES CO. (THE) .....	162
MERCK & CO.....	162
MYLAN BERTEK PHARMACEUTICALS .....	163
NAVILYST MEDICAL.....	163
NIPRO CORP. ....	164
NORTHWEST KIDNEY CENTERS .....	164
NOVARTIS PHARMACEUTICALS .....	165
NOVO NORDISK A/S .....	165
NXSTAGE MEDICAL.....	166
PAR PHARMACEUTICAL INC. ....	166
PFIZER .....	167
PROMETHEUS LABORATORIES INC. ....	167
REGIONAL RENAL RESEARCH INSTITUTE (RRI) .....	168
RENAL ADVANTAGE, INC. ....	169
RENAL VENTURES MANAGEMENT LLC .....	169
ROCHE (F. HOFFMANN-LA ROCHE LTD.) .....	170
ROCKWELL MEDICAL TECHNOLOGIES .....	170
SANOFI-AVENTIS .....	171
SATELLITE HEALTHCARE/WELLBOUND.....	171
SHIRE PHARMACEUTICALS GROUP .....	172
SIGMA-TAU PHARMACEUTICALS .....	172
SOLVAY PHARMACETICALS, INC. ....	173
TAKEDA PHARMACEUTICALS.....	173
TERUMO CORP.....	174
TEVA PHARMACEUTICALS USA.....	174
TORAY INDUSTRIES, INC. ....	175
TRANSVIVO.....	175
UCB.....	176
U.S. RENAL CARE, INC. (USRC).....	176
VASCULAR ACCESS CENTERS.....	177
WAKE FOREST UNIVERSITY OUTPATIENT DIALYSIS .....	177

WATSON PHARMACEUTICALS .....	178
WYETH.....	178
XCORPOREAL, INC.....	179
APPENDIX.....	180
<i>TABLE 55 TOP 50 U.S. HOSPITALS FOR RENAL DISORDERS</i> .....	180
<i>TABLE 55 (CONTINUED)</i> .....	181
<i>TABLE 56 U.S. KIDNEY TRANSPLANT CENTERS, 2006</i> .....	181
<i>TABLE 56 (CONTINUED)</i> .....	182
<i>TABLE 56 (CONTINUED)</i> .....	183
<i>TABLE 56 (CONTINUED)</i> .....	184
<i>TABLE 56 (CONTINUED)</i> .....	185
<i>TABLE 56 (CONTINUED)</i> .....	186
<i>TABLE 56 (CONTINUED)</i> .....	187