

# DRUGS AND DIAGNOSTICS FOR HEMATOLOGICAL DISORDERS: GLOBAL MARKETS



PHM116A  
March 2013

Usha Nagavarapu  
*Project Analyst*

ISBN: 1-56965-050-0

**bcc** | Research  
Market Forecasting

**BCC Research**  
49 Walnut Park, Building 2  
Wellesley, MA 02481  
866-285-7215, 781-489-7301  
[www.bccresearch.com](http://www.bccresearch.com)  
Custom Reports:  
[carol.laverty@bccresearch.com](mailto:carol.laverty@bccresearch.com)

**TABLE OF CONTENTS**

<b>TOPIC</b>	<b>PAGE NO.</b>
CHAPTER 1 INTRODUCTION	1
STUDY GOALS AND OBJECTIVES	1
REASONS FOR DOING THIS STUDY	1
INTENDED AUDIENCE	1
SCOPE OF THE STUDY	2
METHODOLOGY	2
INFORMATION SOURCES	2
ABOUT THE AUTHOR	3
RELATED BCC REPORTS	3
BCC ON-LINE SERVICES	3
DISCLAIMER	3
CHAPTER 2 SUMMARY	5
<i>SUMMARY TABLE HEMATOLOGICAL DISORDERS DRUGS AND DIAGNOSTICS: GLOBAL MARKETS, THROUGH 2017 (\$ MILLIONS)</i>	6
<i>SUMMARY FIGURE HEMATOLOGICAL DISORDERS DRUGS AND DIAGNOSTICS: GLOBAL MARKETS, 2010-2017 (\$ MILLIONS)</i>	6
CHAPTER 3 OVERVIEW	9
<i>TABLE 1 KEY BLOOD DISORDERS</i>	9
<i>TABLE 2 MALIGNANT BLOOD DISORDERS</i>	10
<i>TABLE 3 NON-MALIGNANT BLOOD DISORDERS</i>	10
BLOOD DISEASES	11
<i>TABLE 4 TYPE OF BLOOD CELLS AND FUNCTIONS</i>	11
<i>TABLE 5 BLOOD CELLS AND FUNCTION</i>	12
BLOOD DISORDERS	12
ANEMIA	12
Types of Anemia	13
<i>TABLE 6 THREE MAJOR TYPES OF ANEMIA</i>	13
<i>TABLE 7 ANEMIA: MAJOR CATEGORIES</i>	14
Symptoms	14
<i>TABLE 8 SYMPTOMS OF ANEMIA</i>	15
<i>TABLE 9 TYPES OF ANEMIA</i>	16
MEGALOBLASTIC ANEMIAS	16
Cobalamin Deficiency	17
<i>TABLE 10 DRUGS THAT CAN CAUSE COBALAMIN DEFICIENCY</i>	18
Folate Deficiency	18
<i>TABLE 11 DRUGS: CAUSE OF FOLATE DEFICIENCY</i>	19
DISGNOSTIC TESTS	19
Schilling Test	19
Serum Ferritin and Iron Studies	20
Other Tests	20
TREATMENT	20
HEMOGLOBIN DISORDERS	21
THALASSEMIA	21
SICKLE-CELL ANEMIA	21

<b>TOPIC</b>	<b>PAGE NO.</b>
<i>TABLE 12 KEY FACTS</i>	22
Causes	22
World Health Organization's Resolutions	23
HEMOLYTIC ANEMIA	23
<i>TABLE 13 LAB TESTS FOR ANEMIA</i>	23
Treatment	24
Anemia Medications	24
HEMOSTASIS	25
HEMOSTASIS: STEPS OF MECHANISM	25
<i>TABLE 14 HEMOSTASIS: THREE MAJOR STEPS</i>	26
TYPES OF HEMOSTASIS	26
Hemostasis in Emergency Medicine	26
ARTIFICIAL HEMOSTASIS	27
<i>TABLE 15 DRUGS THAT EFFECT ACTIVITY OF PLATELETS</i>	28
<i>TABLE 16 ANTICOAGULANTS THAT ACT ON THROMBIN</i>	28
BLEEDING DISORDERS	29
<i>TABLE 17 BLEEDING DISORDERS</i>	29
<i>TABLE 18 BLEEDING DISORDERS: SYMPTOMS</i>	30
<i>TABLE 19 SIGNS AND TESTS</i>	30
HEMOPHILIA	30
<i>TABLE 20 KEY CHARACTERISTICS: HEMOPHILIA</i>	31
CLASSIFICATION	31
HISTORICAL BACKGROUND	32
The Clotting Cascade	32
Hemorrhage	33
Natural Inhibitors	33
ACQUIRED HEMOPHILIA	34
FORMS OF HEMOPHILIA	34
Symptoms and Complications	35
Diagnosis	35
Genetic Testing	36
Treatment	36
<i>TABLE 21 FVIII INHIBITORS</i>	39
<i>TABLE 22 MEDICATIONS FOR TREATING HEMOPHILIA</i>	40
Factor VIII Products	40
<i>TABLE 23 FACTOR VIII PRODUCTS</i>	41
Antifibrinolytics	41
<i>TABLE 24 ANTIFIBRINOLYTICS</i>	41
Antihemophilic Agents	41
<i>TABLE 25 ANTIHEMOPHILIC AGENTS</i>	42
Coagulation Factor VIIa, Recombinants	42
Factor VIIa, Recombinant (NovoSeven)	42
Monoclonal Antibodies	42
Rituximab (Rituxan)	43
VON WILLEBRAND DISEASE	43
Symptoms and Diagnosis	43
Treatment	43

<b>TOPIC</b>	<b>PAGE NO.</b>
THROMBOPHILIA	44
Diagnosis and Treatment	44
THROMBOSIS	45
<i>TABLE 26 FORMATION OF THROMBUS</i>	46
DEEP VEIN THROMBOSIS AND TREATMENT	46
Heparin	46
Warfarin	47
SUPERFICIAL THROMBOPHLEBITIS	47
DEEP VENOUS THROMBOSIS	47
Tests	47
Treatment	48
Surgery	48
HEREDITARY HEMORRHAGIC TELANGIECTASIA	48
ERYTHROCYTOSIS	49
ABSOLUTE POLYCYTHEMIA	49
Primary Polycythemia	49
Secondary Polycythemia	50
Chuvash Polycythemia	50
Relative Polycythemia	51
WHITE BLOOD CELL DISORDERS	51
TREATMENT	51
NEUTROPENIA	52
Causes	52
<i>TABLE 27 CAUSES FOR NEUTROPENIA</i>	53
Symptoms and Diagnosis	53
Treatment	53
NEUTROPHILIA	54
BLOOD DISORDERS AFFECTING PLATELETS	55
<i>TABLE 28 WHITE BLOOD CELLS AND DISEASES</i>	55
THROMBOCYTOPENIA	55
Treatment	56
LYMPHOCYTOPENIA	56
Treatment	56
LYMPHOCYTIC LEUKOCYTOSIS	56
MONOCYTOSIS	57
THROMBOCYTHEMIA AND THROMBOCYTOSIS	57
Primary Thrombocythemia	57
Secondary Thrombocytosis	57
<i>TABLE 29 CAUSE OF SECONDARY THROMBOCYTOSIS</i>	58
Symptoms	59
<i>TABLE 30 DIAGNOSTIC TESTS</i>	59
Treatment	60
<i>TABLE 31 MEDICINES FOR THROMBOCYTHEMIA</i>	60
THROMBOCYTOPENIA	61
Causes	61
<i>TABLE 32 CAUSES OF THROMBOCYTOPENIA</i>	61
RARE CONDITIONS THAT CAUSE BLOOD CLOTS	62

<b>TOPIC</b>	<b>PAGE NO.</b>
Signs and Symptoms	63
<i>TABLE 33 SIGNS OF EXTERNAL BLEEDING</i>	63
Tests	63
Treatment	63
SEVERE THROMBOCYTOPENIA	63
EOSINOPHILS AND DISORDERS	64
<i>TABLE 34 COMMON DRUGS TO TREAT EOSINOPHILIA</i>	64
BASOPHILS AND DISORDERS	65
PLASMA CELL DISORDERS	65
CHAPTER 4 HEMATOLOGICAL CANCERS	67
<i>TABLE 35 HEMATOLOGICAL CANCERS (BLOOD CANCERS)</i>	67
CLASSIC CLASSIFICATION	68
<i>TABLE 36 RELATIVE OCCURRENCE OF HEMATOLOGICAL MALIGNANCIES IN THE U.S. (%)</i>	68
<i>TABLE 37 TYPES OF HEMATOLOGICAL CANCERS</i>	69
ACUTE MYELOID LEUKEMIA	70
CHRONIC MYELOID LEUKEMIA	70
ACUTE LYMPHOCYTIC LEUKEMIA	71
CHRONIC LYMPHOCYTIC LEUKEMIA	71
HODGKIN LYMPHOMA	71
NON-HODGKIN LYMPHOMA	72
TREATMENT AND SIDE EFFECTS	72
MULTIPLE MYELOMA	72
MYELOYDYSPLASTIC SYNDROME	72
DIAGNOSIS	73
<i>TABLE 38 FDA APPROVED DRUGS FOR HEMATOLOGY, 2012</i>	73
<i>TABLE 39 NEW HEMATOLOGY DRUG APPROVALS, 2012</i>	73
<i>TABLE 40 FDA APPROVED DRUGS FOR HEMATOLOGY, 2011</i>	74
<i>TABLE 41 APPROVED FDA DRUGS FOR HEMATOLOGICAL DISEASES, 1996-2010</i>	75
CHAPTER 5 HEMATOLOGICAL CANCERS: LEUKEMIA	79
LYMPHOCYTIC LEUKEMIAS	80
MYELOGENOUS LEUKEMIAS	80
<i>TABLE 42 TYPES OF LEUKEMIA</i>	80
<i>TABLE 43 TYPES OF LEUKEMIA AND KEY FEATURES</i>	81
SYMPTOMS	82
CAUSES	83
DIAGNOSIS	84
TESTS	84
<i>TABLE 44 DIAGNOSTIC EXAMS FOR LEUKEMIA</i>	85
COMPLETE BLOOD COUNT	85
WHITE CELL DIFFERENTIAL	85
BLOOD SMEAR	85
<i>TABLE 45 ADDITIONAL TESTS</i>	86
FLUORESCENCE IN SITU HYBRIDIZATION (FISH)	86
FLOW CYTOMETRY	86

<b>TOPIC</b>	<b>PAGE NO.</b>
Immunophenotyping	87
KARYOTYPE TEST	87
POLYMERASE CHAIN REACTION	87
BONE MARROW ASPIRATION/BIOPSY	87
SPINAL TAP (LUMBAR PUNCTURE) AND CEREBROSPINAL FLUID (CSF) ANALYSIS	88
IMMUNOPHENOTYPING OR PHENOTYPING BY FLOW CYTOMETRY	88
CYTOGENETICS AND FLUORESCENT IN SITU HYBRIDIZATION (FISH)	88
POLYMERASE CHAIN REACTION (PCR)	88
<i>TABLE 46 PCR TESTS</i>	89
NON-LABORATORY TESTS	89
<i>TABLE 47 NON-LABORATORY TESTS</i>	89
TREATMENT	89
<i>TABLE 48 COMMON TREATMENTS USED TO FIGHT LEUKEMIA</i>	90
<i>TABLE 49 NEWER CLASSES OF DRUGS</i>	91
DRUG THERAPIES FOR BLOOD CANCERS	91
<i>TABLE 50 ACUTE LYMPHOBLASTIC LEUKEMIA (ALL) TREATMENT</i>	93
<i>TABLE 51 DRUGS APPROVED FOR ACUTE LYMPHOBLASTIC LEUKEMIA (ALL)</i>	94
<i>TABLE 52 DRUGS APPROVED FOR CHRONIC LYMPHOCYTIC LEUKEMIA (CLL)</i>	95
<i>TABLE 53 DRUGS APPROVED FOR ACUTE MYELOID LEUKEMIA (AML)</i>	96
<i>TABLE 54 DRUGS APPROVED FOR CHRONIC MYELOGENOUS LEUKEMIA (CML)</i>	97
HAIRY CELL LEUKEMIA: TREATMENT	97
T-CELL PROLYMPHOCYTIC LEUKEMIA	98
<i>TABLE 55 T-CELL PROLYMPHOCYTIC LEUKEMIA: TREATMENT PLAN</i>	98
JUVENILE MYELOMONOCYTIC LEUKEMIA	98
STAGES OF LEUKEMIA	99
<i>TABLE 56 FACTORS AFFECTING LEUKEMIA STAGING AND PROGNOSIS</i>	99
TREATMENTS AND DRUGS	99
STEM CELL TRANSPLANTATION	100
Allogeneic Stem Cell Transplant	100
Autologous Stem Cell Transplant	100
CHEMOTHERAPY	100
Types of Chemotherapy for Leukemia	100
Chemotherapy for Acute Leukemias	101
Chemotherapy for Chronic Leukemias	101
<i>TABLE 57 CHEMOTHERAPY DRUGS FOR CML</i>	101
<i>TABLE 58 CHEMOTHERAPY DRUGS FOR CLL</i>	101
Intrathecal Chemotherapy	102
TARGETED DRUG THERAPY FOR LEUKEMIA	102
<i>TABLE 59 TARGETED THERAPY DRUGS</i>	102
MONOCLONAL ANTIBODY THERAPY	102
RADIOIMMUNOTHERAPY	103
<i>TABLE 60 ADVANTAGES OF RADIOIMMUNOTHERAPY</i>	103
RADIATION THERAPY	103
<i>TABLE 61 COMMON RADIATION TREATMENTS: LEUKEMIA</i>	104
EXTERNAL BEAM RADIATION THERAPY (EBRT)	104
TOTAL BODY IRRADIATION	104

<b>TOPIC</b>	<b>PAGE NO.</b>
TOTAL MARROW IRRADIATION	104
NUTRITION THERAPY AFTER A STEM CELL TRANSPLANT	105
MANAGING SIDE EFFECTS WITH NATUROPATHIC THERAPIES	105
PAIN MANAGEMENT FOR LEUKEMIA	105
<i>TABLE 62 PAIN MEDICATIONS</i>	105
<i>TABLE 63 EMERGING THERAPIES FOR LEUKEMIA</i>	106
CONCLUSIONS	107
<b>CHAPTER 6 HEMATOLOGICAL CANCERS: LYMPHOMA</b>	<b>109</b>
OVERVIEW	109
LYMPHOMA CAUSES	110
<i>TABLE 64 CAUSES FOR LYMPHOMA</i>	111
CLASSIFICATION	111
<i>TABLE 65 LYMPHOMA TYPES</i>	112
STAGING	113
<i>TABLE 66 STAGING FOR HL AND NHL TUMORS</i>	114
NON-HODGKIN LYMPHOMA	114
<i>TABLE 67 MATURE B-CELL NEOPLASMS</i>	115
<i>TABLE 68 MATURE T-CELL AND NATURAL KILLER (NK) CELL NEOPLASMS</i>	115
<i>TABLE 69 HODGKIN LYMPHOMA</i>	116
<i>TABLE 70 IMMUNODEFICIENCY-ASSOCIATED LYMPHO- PROLIFERATIVE DISORDERS</i>	116
Signs and Symptoms	116
<i>TABLE 71 SYMPTOMS OF LYMPHOMA</i>	117
<i>TABLE 72 FIVE-YEAR RELATIVE SURVIVAL BY STAGE AT DIAGNOSIS (%)</i>	117
Diagnosis and Tests	118
Biopsy	118
Imaging Studies	118
<i>TABLE 73 IMAGING TESTS</i>	118
Bone Marrow Examination	118
Other Tests	119
Lumbar Puncture	119
Organ Function Tests	119
Prognostic Factors	119
<i>TABLE 74 HL, THE INTERNATIONAL PROGNOSTIC INDEX</i>	119
<i>TABLE 75 THE INTERNATIONAL PROGNOSTIC INDEX FOR NHL</i>	120
Lymphoma Treatment	120
Radiation and Chemotherapy	121
Radiation Therapy	121
Chemotherapy	121
Biological Therapy	122
<i>TABLE 76 PROMISING THERAPIES FOR TREATING LYMPHOMA</i>	122
Complementary/Alternative Therapies	122
<b>CHAPTER 7 HEMATOLOGICAL CANCERS: MYELOMA</b>	<b>125</b>
OVERVIEW	125
CAUSE	126
SYMPTOMS	126

<b>TOPIC</b>	<b>PAGE NO.</b>
COMPLICATIONS OF MYELOMA	126
CRYOGLOBULINEMIA	126
AMYLOIDOSIS	127
TYPES OF MYELOMA	127
INCIDENCE	127
DIAGNOSIS	128
TESTS	128
PROGNOSTIC INDICATORS	129
<i>TABLE 77 PROGNOSTIC INDICATORS FOR MYELOMA</i>	129
BONE MARROW EXAMINATION	130
<i>TABLE 78 OTHER BONE MARROW TESTS</i>	130
STAGING	131
MONOCLONAL GAMMOPATHY OF UNDETERMINED SIGNIFICANCE	131
SMOLDERING MULTIPLE MYELOMA	131
INDOLENT MULTIPLE MYELOMA	131
SYMPTOMATIC MULTIPLE MYELOMA	132
<i>TABLE 79 MYELOMA: STAGING CRITERIA</i>	132
TREATMENT AND PROGNOSIS	132
<i>TABLE 80 MYELOMA'S RESPONSE TO TREATMENT</i>	133
Myeloma Therapy	133
Chemotherapy	134
Radiation Therapy	134
Stem Cell Transplantation	134
Supportive Care	135
<i>TABLE 81 SUPPORTIVE CARE</i>	135
OTHER DRUG THERAPY	136
New Drug Therapy	136
<i>TABLE 82 DRUGS FOR MULTIPLE MYELOMA</i>	137
<i>TABLE 83 EMERGING THERAPIES FOR MYELOMA</i>	138
CONCLUSIONS	138
CHAPTER 8 HEMATOLOGICAL CANCER: MYELOYDYSPLASTIC SYNDROMES	140
<i>TABLE 84 CHARACTERISTICS OF MDS</i>	140
<i>TABLE 85 MDS CAUSES</i>	141
<i>TABLE 86 MDS OR AML: THREE CATEGORIES</i>	142
CLASSES	142
<i>TABLE 87 MYELOYDYSPLASTIC SYNDROMES: KEY FACTS</i>	142
<i>TABLE 88 FAB CLASSIFICATION OF MDS</i>	143
<i>TABLE 89 THE 2008 WHO CLASSIFICATION OF MDS</i>	144
INTERNATIONAL PROGNOSTIC SCORING SYSTEM	145
<i>TABLE 90 INTERNATIONAL PROGNOSTIC SCORING SYSTEM RISK GROUPS AND PROGNOSIS</i>	145
DIAGNOSIS AND TESTS	145
<i>TABLE 91 CHANGES IN CELLS AND MDS</i>	146
PROGNOSIS AND TREATMENT OPTIONS	146
CHEMOTHERAPY	147
SUPPORTIVE CARE	147
DRUG PROFILES	149



<b>TOPIC</b>	<b>PAGE NO.</b>
EPOETIN ALFA (PROCRIT, EPOGEN)	149
DARBEPOETIN (ARANESP)	149
SARGRAMOSTIM (LEUKINE)	150
FILGRASTIM (NEUPOGEN)	150
DECITABINE (DACOGEN)	150
LENALIDOMIDE (REVLIMID)	150
AZACITIDINE	150
PREVIOUSLY TREATED MYELOYDYSPLASTIC SYNDROMES	151
CONCLUSIONS	151
CHAPTER 9 HEMATOLOGICAL CANCERS: MYELOPROLIFERATIVE DISORDERS	153
TYPES OF CHRONIC MYELOPROLIFERATIVE DISORDERS	153
TABLE 92 CHRONIC MYELOPROLIFERATIVE DISORDERS	153
CLASSIFICATION: WHO	154
TABLE 93 CLASSIFICATION OF MYELOID NEOPLASMS ACCORDING TO THE 2008 WHO CLASSIFICATION SCHEME	155
TABLE 94 MYELOPROLIFERATIVE NEOPLASMS: KEY FACTS	156
STAGES OF CHRONIC MYELOPROLIFERATIVE DISORDERS	156
DIAGNOSIS	157
Tests	157
TABLE 95 DIAGNOSTIC TESTS	157
TREATMENT	157
OTHER DRUG THERAPY	157
POLYCYTHEMIA VERA	158
OVERVIEW	158
TABLE 96 SYMPTOMS OF POLYCYTHEMIA VERA	159
CAUSES	159
RISK FACTORS	159
TABLE 97 BLOOD TESTS FOR POLYCYTHEMIA VERA	160
TREATMENT OF POLYCYTHEMIA VERA	160
DRUGS FOR TREATING POLYCYTHEMIA VERA	160
TABLE 98 TREATMENT FOR POLYCYTHEMIA VERA	161
PROGNOSIS	161
COMPLICATIONS	161
Blood Clots	161
Enlarged Spleen (Splenomegaly)	161
Problems Due to High Levels of Red Blood Cells	162
Other Blood Disorders	162
CHRONIC IDIOPATHIC MYELOFIBROSIS	162
CAUSES	162
TABLE 99 CAUSATIVE FACTORS FOR MYELOFIBROSIS	163
TABLE 100 COMPLICATIONS FROM MYELOFIBROSIS	163
PATHOGENESIS	164
WHO DIAGNOSTIC CRITERIA	164
TABLE 101 WHO DIAGNOSTIC CRITERIA FOR PMF	165
PROGNOSIS	165
TABLE 102 RISK FACTORS	166
SYMPTOMS	166

<b>TOPIC</b>	<b>PAGE NO.</b>
<i>TABLE 103 IDIOPATHIC MYELOFIBROSIS AND SYMPTOMS</i>	167
<i>TABLE 104 PROGNOSIS</i>	167
TREATMENTS FOR MYELOFIBROSIS	168
<i>TABLE 105 TREATMENT OF CHRONIC IDIOPATHIC MYELOFIBROSIS</i>	169
EXPERIMENTAL DRUG THERAPY	170
Pomalidomide	170
<i>TABLE 106 SOMATIC MUTATIONS</i>	170
ESSENTIAL THROMBOCYTHEMIA	171
<i>TABLE 107 CAUSES OF THROMBOCYTOSIS</i>	171
SYMPTOMS	172
<i>TABLE 108 SYMPTOMS</i>	172
PATHOPHYSIOLOGY	172
DIAGNOSTIC CRITERIA	173
<i>TABLE 109 ESSENTIAL THROMBOCYTHEMIA: DIAGNOSTIC CRITERIA</i>	173
THERAPEUTIC STRATEGIES	174
PROGNOSIS	174
CAUSES, INCIDENCE AND RISK FACTORS	174
GENES: ESSENTIAL THROMBOCYTHEMIA	174
TREATMENT OF ESSENTIAL THROMBOCYTHEMIA	175
DIAGNOSIS	175
<i>TABLE 110 TREATMENT OF ET</i>	176
Anti-platelet Treatment	177
ADP Receptor Antagonists	177
Platelet-Lowering Treatment	177
Anagrelide	178
Interferon-a (IFN-a)	178
ALTERNATIVE CYTOREDUCTIVE THERAPY	178
Pipobroman (PI)	178
Busulfan (BU)	178
JAK2 V617F MUTATION AND MANAGEMENT OF ET	179
CHRONIC NEUTROPHILIC LEUKEMIA	179
TREATMENT	179
<i>TABLE 111 TREATMENT OF CHRONIC NEUTROPHILIC LEUKEMIA</i>	180
CHRONIC EOSINOPHILIC LEUKEMIA	180
<i>TABLE 112 CHRONIC EOSINOPHILIC LEUKEMIA: SYMPTOMS</i>	180
TREATMENT	180
<i>TABLE 113 TREATMENT OF CHRONIC EOSINOPHILIC LEUKEMIA</i>	181
PIPELINE DRUGS	181
Incyte	181
Jakavi in Europe	182
SUMMARY	182
<i>TABLE 114 CURRENT DRUGS</i>	183
CHAPTER 10 WORLDWIDE INCIDENCE: BLOOD DISORDERS AND BLOOD CANCER	185
<i>TABLE 115 CANCER KEY FACTS</i>	185
<i>TABLE 116 INCREASE IN CANCER BURDEN: FACTORS</i>	186
INDIA	187

<b>TOPIC</b>	<b>PAGE NO.</b>
TABLE 117 CANCER CASES AND TREATMENT COST IN INDIA, 2008-2010 (\$ MILLIONS)	188
KENYA	188
WORLDWIDE INCIDENCE OF BLOOD CANCER	189
TABLE 118 WORLDWIDE INCIDENCE OF BLOOD CANCER, 2008 (IN THOUSANDS)	189
TABLE 119 WORLDWIDE INCIDENCE OF BLOOD CANCER IN MEN, 2008 (THOUSANDS)	189
TABLE 120 WORLDWIDE INCIDENCE OF BLOOD CANCER IN WOMEN, 2008 (THOUSANDS)	190
TABLE 121 TOP 10 COUNTRIES' CANCER RATES (PER 100,000)	190
BLOOD CANCER INCIDENCE IN UNITED STATES	191
TABLE 122 ESTIMATED INCIDENCE RATES FOR BLOOD CANCERS IN THE U.S., 2010 AND 2011 (PER 100,000 POPULATION)	191
FIGURE 1 ESTIMATED INCIDENCE RATES FOR BLOOD CANCERS IN THE U.S., 2010 AND 2011 (PER 100,000 POPULATION)	191
TABLE 123 ESTIMATED NEW CASES OF LEUKEMIA, LYMPHOMA AND MYELOMA IN THE U.S., 2011	192
FIGURE 2 ESTIMATED NEW CASES OF LEUKEMIA, LYMPHOMA AND MYELOMA IN THE U.S., 2011	192
TABLE 124 ESTIMATED LEUKEMIA AND LYMPHOMA INCIDENCE IN THE U.S., 2012	193
FIGURE 3 ESTIMATED LEUKEMIA AND LYMPHOMA INCIDENCE IN THE U.S., 2012	193
Deaths	193
LEUKEMIA	194
Reactors and Blood Cancers	194
Signs and Symptoms	195
Leukemia: Worldwide Incidence	196
TABLE 125 GLOBAL INCIDENCE OF LEUKEMIA, 2010 (PER 100,000 INDIVIDUALS)	196
Leukemia in United States	197
TABLE 126 LEUKEMIA INCIDENCE IN THE U.S.	197
TABLE 127 ESTIMATED NEW CASES OF LEUKEMIA IN THE U.S., 2010-2012 (NO. OF CASES)	198
FIGURE 4 ESTIMATED NEW CASES OF LEUKEMIA IN THE U.S., 2010-2012 (NO. OF CASES)	198
TABLE 128 ESTIMATED NEW CASES OF LEUKEMIA IN THE U.S., ADULTS AND CHILDREN, 2011 (%/NO. OF CASES)	198
TABLE 129 APPROXIMATE PREVALENCE OF DIFFERENT TYPES OF LEUKEMIA IN THE U.S., 2008 (NO. OF CASES)	199
FIGURE 5 APPROXIMATE PREVALENCE OF DIFFERENT TYPES OF LEUKEMIA IN THE UNITED STATES, 2008 (NO. OF CASES)	199
Leukemia in Children in the U.S.	200
TABLE 130 LEUKEMIA IN ADULTS AND CHILDREN IN THE U.S., 2011 (NO. OF CASES)	200
FIGURE 6 LEUKEMIA IN ADULTS AND CHILDREN IN THE U.S., 2011 (NO. OF CASES)	200
Leukemia Incidence in Adolescents and Young Adults in the U.S.	201
Leukemia Incidence in Adults in the U.S.	201

<b>TOPIC</b>	<b>PAGE NO.</b>
<i>TABLE 131 TYPES OF LEUKEMIA IN ADULTS IN THE U.S.</i>	201
<i>TABLE 132 ESTIMATED LEUKEMIA INCIDENCE IN THE U.S., 2012 (NO OF CASES)</i>	202
<i>FIGURE 7 ESTIMATED LEUKEMIA INCIDENCE IN THE U.S., 2012 (NO. OF CASES)</i>	202
<i>TABLE 133 INCIDENCE RATES BY RACE, 2005-2009 (PER 100,000 PERSONS)</i>	202
Survival	203
<i>TABLE 134 THE FIVE-YEAR RELATIVE SURVIVAL RATES, 2001-2007</i>	203
<i>TABLE 135 ESTIMATED DEATHS FOR LEUKEMIA IN THE U.S., 2011</i>	204
<i>FIGURE 8 ESTIMATED DEATHS FOR LEUKEMIA IN THE U.S., 2011</i>	204
Leukemia Incidence in the United Kingdom	205
<i>TABLE 136 LEUKEMIA STATISTICS IN THE U.K.: NUMBER OF NEW CASES, INCIDENCE RATES BY GENDER PER 100,000 POPULATION, 2008</i>	205
Cause	206
<i>TABLE 137 ACS ESTIMATES FOR ACUTE LYMPHOCYTIC LEUKEMIA (ALL) INCIDENCE IN THE U.S., 2012</i>	207
LYMPHOMA	207
NON-HODGKIN'S LYMPHOMA	207
Signs and Symptoms	208
Possible Causes	208
Treatment	209
Worldwide Incidence	209
<i>TABLE 138 ESTIMATED NON-HODGKIN LYMPHOMA STATISTICS: WORLDWIDE, 2008 (INCIDENCE RATES PER 100,000 POPULATION)</i>	210
<i>FIGURE 9 ESTIMATED NON-HODGKIN LYMPHOMA STATISTICS: WORLDWIDE, 2008 (INCIDENCE RATES PER 100,000 POPULATION)</i>	211
<i>TABLE 139 ESTIMATED NON-HODGKIN LYMPHOMA STATISTICS: WORLDWIDE, 2008 (MORTALITY RATES PER 100,000 POPULATION)</i>	211
<i>FIGURE 10 ESTIMATED NON-HODGKIN LYMPHOMA STATISTICS: WORLDWIDE, 2008 (MORTALITY RATES PER 100,000 POPULATION)</i>	212
HODGKIN'S LYMPHOMA	213
<i>TABLE 140 HODGKIN LYMPHOMA WORLDWIDE, 2008 (ESTIMATED INCIDENCE RATES PER 100,000 POPULATION)</i>	213
<i>FIGURE 11 HODGKIN LYMPHOMA WORLDWIDE, 2008 (ESTIMATED INCIDENCE RATES PER 100,000 POPULATION)</i>	214
Lymphoma Incidence In Canada	214
Lymphoma and European Union	215
Non-Hodgkin's Lymphoma	215
<i>TABLE 141 ESTIMATED NON-HODGKIN LYMPHOMA STATISTICS: EU-27 COUNTRIES, 2008 (AGE-STANDARDIZED INCIDENCE RATES PER 100,000)</i>	215
<i>FIGURE 12 ESTIMATED NON-HODGKIN LYMPHOMA STATISTICS: EU-27 COUNTRIES, 2008 (AGE-STANDARDIZED INCIDENCE RATES PER 100,000)</i>	216
<i>TABLE 142 ESTIMATED NON-HODGKIN LYMPHOMA STATISTICS: EU-27 COUNTRIES, 2008 (AGE-STANDARDIZED MORTALITY RATES PER 100,000)</i>	217
<i>FIGURE 13 ESTIMATED NON-HODGKIN LYMPHOMA STATISTICS: EU-27 COUNTRIES, 2008 (AGE-STANDARDIZED MORTALITY RATES PER 100,000)</i>	217
Hodgkin's Lymphoma in European Union Countries	218
<i>TABLE 143 HODGKIN LYMPHOMA IN EU-27 COUNTRIES, 2008 (ESTIMATED INCIDENCE RATES PER 100,000)</i>	219

<b>TOPIC</b>	<b>PAGE NO.</b>
<i>FIGURE 14 HODGKIN LYMPHOMA IN EU-27 COUNTRIES, 2008 (ESTIMATED INCIDENCE RATES PER 100,000)</i>	219
United States: Lymphoma	220
New Cases	220
<i>TABLE 144 ESTIMATED NEW CASES AND DEATHS FOR LYMPHOMA IN THE U.S., 2012 (NO. OF CASES)</i>	221
<i>FIGURE 15 ESTIMATED NEW CASES AND DEATHS FOR LYMPHOMA IN THE U.S., 2012 (NO. OF CASES)</i>	221
<i>TABLE 145 ESTIMATED NEW CASES AND DEATHS OF LYMPHOMA IN THE U.S., 2011 AND 2012 (NO. OF CASES)</i>	222
<i>FIGURE 16 ESTIMATED NEW CASES AND DEATHS OF LYMPHOMA IN THE U.S., 2011 AND 2012 (NO. OF CASES)</i>	222
<i>TABLE 146 ESTIMATED NEW CASES OF LYMPHOMA TYPES IN THE U.S., 2011 AND 2012 (NO. OF CASES)</i>	223
<i>FIGURE 17 ESTIMATED NEW CASES OF LYMPHOMA TYPES IN THE U.S., 2011 AND 2012 (NO. OF CASES)</i>	223
<i>TABLE 147 NEW CASES OF LYMPHOMA BY GENDER, 2011 (NO. OF CASES)</i>	224
<i>FIGURE 18 NEW CASES OF LYMPHOMA BY GENDER, 2011 (NO. OF CASES)</i>	224
<i>TABLE 148 ESTIMATED DEATHS FROM LYMPHOMA BY GENDER, 2011 (NO. OF CASES)</i>	224
<i>FIGURE 19 ESTIMATED DEATHS FROM LYMPHOMA BY GENDER, 2011 (NO. OF CASES)</i>	224
<i>TABLE 149 AGE-SPECIFIC INCIDENCE RATES, BY GENDER, FOR NHL</i>	225
<i>TABLE 150 INCIDENCE RATES BY RACE, 2005-2009 (PER 100,000 PEOPLE)</i>	226
<i>TABLE 151 DEATH RATES BY RACE, 2005-2009 (PER 100,000 PEOPLE)</i>	226
Race and Ethnicity	227
Lymphoma in Children	227
Lymphoma in Adolescents and Young Adults	227
Lymphoma in Adults	228
Survival	228
<i>TABLE 152 STAGE DISTRIBUTION AND FIVE-YEAR RELATIVE SURVIVAL BY STAGE AT DIAGNOSIS, 2002-2008 (ALL RACES, BOTH SEXES, %)</i>	229
Lymphoma in United Kingdom	229
<i>TABLE 153 NON-HODGKIN LYMPHOMA IN THE U.K.: NUMBER OF NEW CASES, INCIDENCE, 2009 (RATES PER 100,000 POPULATION)</i>	229
<i>TABLE 154 NON-HODGKIN LYMPHOMA DEATH IN THE U.K. MORTALITY, 2010 (RATES PER 100,000 POPULATION)</i>	230
Hodgkin Lymphoma in United Kingdom	231
<i>TABLE 155 ESTIMATED HODGKIN LYMPHOMA STATISTICS IN THE U.K., 2008 (NUMBER OF NEW CASES, PER 100,000 POPULATION)</i>	231
<i>TABLE 156 HODGKIN'S LYMPHOMA IN THE U.K., 2008 (ESTIMATED NUMBER OF DEATHS PER 100,000 POPULATION)</i>	232
<i>FIGURE 20 HODGKIN'S LYMPHOMA IN THE U.K., 2008 (ESTIMATED NUMBER OF DEATHS PER 100,000 POPULATION)</i>	232
MYELOMA	232
Symptoms	233
Myeloma Incidence Worldwide	233
<i>TABLE 157 MYELOMA INCIDENCE WORLDWIDE, 2008 (ESTIMATED INCIDENCE RATES PER 100,000 POPULATION)</i>	234
<i>FIGURE 21 MYELOMA INCIDENCE WORLDWIDE, 2008 (ESTIMATED INCIDENCE RATES PER 100,000 POPULATION)</i>	234

<b>TOPIC</b>	<b>PAGE NO.</b>
<i>TABLE 158 MYELOMA MORTALITY RATES WORLD WIDE, 2008 (ESTIMATED INCIDENCE RATES; PER 100,000 POPULATION)</i>	235
<i>FIGURE 22 MYELOMA MORTALITY RATES WORLD WIDE, 2008 (ESTIMATED INCIDENCE RATES; PER 100,000 POPULATION)</i>	236
Myeloma in European Union Countries	237
<i>TABLE 159 MYELOMA INCIDENCE RATES, EU-27 COUNTRIES, 2008 (ESTIMATED INCIDENCE RATES; PER 100,000 POPULATION)</i>	237
<i>FIGURE 23 MYELOMA INCIDENCE RATES, EU-27 COUNTRIES, 2008 (ESTIMATED INCIDENCE RATES; PER 100,000 POPULATION)</i>	237
<i>TABLE 160 MYELOMA MORTALITY RATES WORLD WIDE, 2008 (ESTIMATED MORTALITY RATES; PER 100,000 POPULATION)</i>	238
<i>FIGURE 24 MYELOMA MORTALITY RATES, WORLDWIDE, 2008 (ESTIMATED MORTALITY RATES; PER 100,000 POPULATION)</i>	239
Myeloma in United States	239
<i>TABLE 161 ESTIMATED INCIDENCE AND DEATHS FOR MYELOMA IN THE U.S., 2011 AND 2012 (NO. OF CASES)</i>	240
<i>FIGURE 25 ESTIMATED INCIDENCE AND DEATHS FOR MYELOMA IN THE U.S., 2011 AND 2012 (NO. OF CASES)</i>	240
<i>TABLE 162 ESTIMATED INCIDENCE OF MYELOMA IN THE U.S. BY GENDER, 2011 AND 2012 (NO. OF CASES)</i>	241
<i>FIGURE 26 ESTIMATED INCIDENCE OF MYELOMA IN THE U.S. BY GENDER, 2011 AND 2012 (NO. OF CASES)</i>	241
<i>TABLE 163 INCIDENCE RATES BY RACE AND GENDER, 2005-2009 (PER 100,000 PEOPLE)</i>	242
<i>TABLE 164 DEATH RATES BY RACE AND GENDER, 2005-2009 (PER 100,000 PEOPLE)</i>	243
Survival	243
<i>TABLE 165 DISTRIBUTION AND FIVE-YEAR RELATIVE SURVIVAL BY STAGE AT DIAGNOSIS, 2002-2008 (ALL RACES, BOTH SEXES, %)</i>	244
Myeloma in the United Kingdom	244
<i>TABLE 166 MYELOMA STATISTICS IN THE U.K. NUMBER OF NEW CASES: INCIDENCE RATES PER 100,000 POPULATION, 2009</i>	244
<i>TABLE 167 MYELOMA NUMBER OF DEATHS IN THE U.K. MORTALITY RATES PER 100,000 POPULATION, 2010</i>	245
Conclusions	245
MYELODYSPLASTIC SYNDROMES (MDS)	246
Signs and Symptoms	246
<i>TABLE 168 ESTIMATED NEW CASES FOR MDS IN THE U.S., 2012</i>	247
Race and Ethnicity	248
BLOOD DISEASES AND INCIDENCE	248
ANEMIA	249
SICKLE-CELL ANEMIA	249
THALASSEMIA	250
BLEEDING DISORDERS	251
HEMOPHILIA	251
Worldwide Incidence of Hemophilia	252
Mortality/Morbidity	252
Hemophilia in the United States	253
CLOTTING DISORDERS	253

<b>TOPIC</b>	<b>PAGE NO.</b>
CHAPTER 11 HEMATOLOGY INSTRUMENTS AND REAGENTS: A GLOBAL MARKET PERSPECTIVE	256
HEMATOLOGICAL MALIGNANCIES	256
MARKET DYNAMICS: HEMATOLOGY INSTRUMENTS AND REAGENTS	256
<i>TABLE 169 GLOBAL HEMATOLOGY INSTRUMENTS AND REAGENTS MARKET, THROUGH 2017 (\$ MILLIONS)</i>	257
<i>FIGURE 27 GLOBAL HEMATOLOGY INSTRUMENTS AND REAGENTS MARKET, 2010-2017 (\$ MILLIONS)</i>	257
GLOBAL MARKET	258
MARKET DRIVERS	258
<i>TABLE 170 KEY PRODUCTS</i>	259
KEY PLAYERS	259
<i>TABLE 171 GLOBAL MAJOR PLAYERS IN THE HEMATOLOGY MARKET</i>	260
KEY COMPANY PROFILES	260
Roche	260
Sysmex	261
Flow Cytometers	261
<i>TABLE 172 FLOW CYTOMETRY 171: KEY PLAYERS</i>	262
<i>TABLE 173 FLOW CYTOMETRY PRODUCTS: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	262
<i>FIGURE 28 FLOW CYTOMETRY PRODUCTS: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	263
<i>TABLE 174 MAJOR FLOW CYTOMETRY APPLICATIONS</i>	263
Coagulation Analyzers	264
<i>TABLE 175 CELL ANALYZERS: KEY PLAYERS</i>	264
Future Outlook	264
Blood Disorder Tests and Market	265
<i>TABLE 176 HEMATOLOGY TESTS</i>	266
HEMATOLOGY TEST PRODUCTS AND MARKET	266
Complete Blood Count (CBC)	266
<i>TABLE 177 COMPLETE BLOOD COUNT: COMPONENTS MEASURED</i>	267
MAJOR ROUTINE AND SPECIAL HEMATOLOGY TESTS	267
Partial Thromboplastin Time	267
Total Serum Protein	268
Chemistry Panel	268
<i>TABLE 178 TESTS INCLUDED IN A CHEMISTRY SCREEN</i>	268
<i>TABLE 179 CHEMISTRY SCREEN</i>	269
Vitamin B12	269
The Cold Agglutinins Test	269
Prothrombin	269
Reticulocyte	270
Urine Cytology	270
<i>TABLE 180 URINE TESTS AND APPLICATIONS</i>	270
BLOOD PROTEIN TESTING	271
TUMOR MARKER TESTS	271
IN VITRO DIAGNOSTIC MARKET	272
<i>TABLE 181 IVD PRODUCTS MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	272

<b>TOPIC</b>	<b>PAGE NO.</b>
<i>FIGURE 29 IVD PRODUCTS MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	272
<i>TABLE 182 UNITED STATES: IVD MARKET SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	273
<i>FIGURE 30 UNITED STATES: IVD MARKET SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	273
Immunoassays	273
<i>TABLE 183 GLOBAL MARKET FOR IMMUNOASSAY SYSTEMS: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	274
<i>FIGURE 31 GLOBAL MARKET FOR IMMUNOASSAY SYSTEMS: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	274
Market Trends	274
<i>TABLE 184 GLOBAL MARKET FOR ENZYME IMMUNOASSAY SYSTEMS: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	275
<i>FIGURE 32 GLOBAL MARKET FOR ENZYME IMMUNOASSAY SYSTEMS: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	275
<i>TABLE 185 KEY PLAYERS IN THE IMMUNOASSAYS MARKET</i>	276
Molecular Diagnostics	276
<i>TABLE 186 MOLECULAR DIAGNOSTICS MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	277
<i>FIGURE 33 MOLECULAR DIAGNOSTICS MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	277
<i>TABLE 187 MAJOR PLAYERS: MOLECULAR DIAGNOSTICS MARKET</i>	278
POINT-OF-CARE MARKET	278
<i>TABLE 188 THE POINT-OF-CARE (POC) TESTING MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	278
<i>FIGURE 34 THE POINT-OF-CARE (POC) TESTING MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	278
<i>TABLE 189 GLOBAL MARKET FOR POC TESTS: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	279
<i>FIGURE 35 GLOBAL MARKET FOR POC TESTS: SALES AND FORECAST, 2012 AND 2017 (\$ MILLIONS)</i>	280
POC Immunoassays	280
<i>TABLE 190 THE POINT-OF-CARE IMMUNOASSAY MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	281
<i>FIGURE 36 THE POINT-OF-CARE IMMUNOASSAY MARKET: SALES AND FORECAST, 2012 AND 2017 (\$ MILLIONS)</i>	281
Cardiac Markers	281
POC Market Penetration	282
FUTURE OUTLOOK	282
BLOOD TRANSFUSION DIAGNOSTIC TESTING MARKET	282
<i>TABLE 191 MARKET PLAYERS</i>	283
CONCLUSIONS	283
CHAPTER 12 BLOOD DISEASES TREATMENTS MARKET	285
THERAPEUTIC DRUGS AND MARKET	285
<i>TABLE 192 GLOBAL BLOOD DISORDER MARKET, THROUGH 2017 (\$ MILLIONS)</i>	285
<i>FIGURE 37 GLOBAL BLOOD DISORDER MARKET, 2010-2017 (\$ MILLIONS)</i>	285
<i>TABLE 193 GLOBAL BLOOD DISORDER MARKET SHARE, 2010 AND 2017 (%)</i>	286



<b>TOPIC</b>	<b>PAGE NO.</b>
KEY MARKET PLAYERS	287
<i>TABLE 194 PATENT EXPIRIES OF MAJOR BLOCKBUSTERS</i>	287
<i>TABLE 195 KEY PLAYERS: PRODUCTS AND MARKET SHARE, 2010 (%)</i>	287
<i>TABLE 196 MARKET DRIVERS</i>	288
<i>TABLE 197 MARKET RESTRAINTS</i>	288
ANEMIA TREATMENT MARKET	288
<i>TABLE 198 ANEMIA TREATMENT MARKET, THROUGH 2017 (\$ MILLIONS)</i>	289
<i>FIGURE 38 ANEMIA TREATMENT MARKET, 2010-2017 (\$ MILLIONS)</i>	289
<i>TABLE 199 ERYTHROPOIETIN STIMULATING AGENTS (ESAS)</i>	290
Aranesp	290
<i>TABLE 200 KEY ANEMIA DRUGS SALES, 2010-2012 (\$ MILLIONS)</i>	290
<i>FIGURE 39 KEY ANEMIA DRUGS SALES, 2010-2012 (\$ MILLIONS)</i>	290
Epogen	291
Procrit	291
Cost	292
NeoRecormon/Epogin	292
<i>TABLE 201 NEORECORMON/EPOGIN SALES AND FORECAST, 2010-2012 (\$ MILLIONS)</i>	293
<i>FIGURE 40 NEORECORMON/EPOGIN SALES AND FORECAST, 2010-2012 (\$ MILLIONS)</i>	293
<i>TABLE 202 GLOBAL NEORECORMON/EPOGIN SALES, 2009 (\$ MILLIONS/%)</i>	294
Competition	294
MEDICARE AND ANEMIA DRUG USAGE	294
Anemia Treatment	294
<i>TABLE 203 COMMON ANEMIA TREATMENTS</i>	295
Anemia Market and New Drugs	295
Market Trends	296
Major Players	296
GlaxoSmithKline and Bayer	296
FibroGen	297
Ligand	298
Pluristem Therapeutics	298
AMAG Pharma	298
Akebia Therapeutics	298
<i>TABLE 204 AKEBIA THERAPEUTICS ANEMIA DRUG IN DEVELOPMENT-AKB-6548</i>	299
THROMBOSIS TREATMENT MARKET	299
<i>TABLE 205 GLOBAL THROMBOSIS THERAPEUTIC MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	300
<i>FIGURE 41 GLOBAL THROMBOSIS THERAPEUTIC MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	300
<i>TABLE 206 LEADING DRUGS IN THE ANTITHROMBOTIC AGENTS MARKET</i>	301
GLOBAL ANTICOAGULANT MARKET	301
Oral Anticoagulants	302
Injectable Anticoagulants	303
<i>TABLE 207 GLOBAL ANTICOAGULANT DRUG MARKET SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	304
<i>FIGURE 42 GLOBAL ANTICOAGULANT DRUG MARKET SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	304

<b>TOPIC</b>	<b>PAGE NO.</b>
Development of New Drugs and Market	304
Antiplatelet Market	305
<i>TABLE 208 GLOBAL ANTIPLATELET DRUG MARKET, THROUGH 2017 (\$ MILLIONS)</i>	305
<i>FIGURE 43 GLOBAL ANTIPLATELET DRUG MARKET, 2010-2017 (\$ MILLIONS)</i>	305
<i>TABLE 209 ANTIPLATELET AND ANTICOAGULANT DRUGS</i>	306
DRUG PROFILES	306
Plavix	306
Generic Versions of Clopidogrel	307
Plavix: History	307
Plavix: Market Trends	307
Effient/Efient	308
COMPETITION	309
<i>TABLE 210 ANTIPLATELET DRUGS (PLATELET ADP ANTAGONISTS): SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	309
<i>TABLE 211 U.S. SALES: PLAVIX, 2012 (\$ MILLIONS)</i>	310
Brilinta	310
Edoxaban	310
Semuloparin	311
<i>TABLE 212 GLOBAL SEMULOPARIN SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	311
<i>FIGURE 44 GLOBAL SEMULOPARIN SALES AND FORECAST, 2011-2017 (\$ MILLIONS)</i>	312
Enoxaparin	312
Generic Lovenox	312
<i>TABLE 213 ANTITHROMBOTIC AGENTS (BY PHARMACOLOGICAL CLASS): SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	313
Lovenox History	313
NEW DRUGS	314
Xarelto	314
<i>TABLE 214 XARELTO: APPROVALS IN VENOUS ARTERIAL THROMBOEMBOLIC (VAT) INDICATIONS</i>	316
Pradaxa	317
Arixtra	317
<i>TABLE 215 ANTITHROMBOTIC AGENTS IN DEVELOPMENT</i>	318
Vorapaxar	318
Activase	319
<i>TABLE 216 ACTIVASE: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	319
Angiomax	319
<i>TABLE 217 ANGIOMAX: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	320
Market Trends for Anticoagulants	320
Warfarin	320
PLATELET AGGREGATION INHIBITORS AND MARKET IMPACT	321
<i>TABLE 218 KEY PLATELET AGGREGATION INHIBITOR DRUG SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	321
<i>TABLE 219 PLATELET AGGREGATION INHIBITORS: PIPELINE DRUGS</i>	323
Cangrelor	323
<i>TABLE 220 PLATELET INHIBITOR: PIPELINE DRUGS</i>	324
<i>TABLE 221 THROMBOSIS MARKET: PIPELINE DRUGS</i>	325

<b>TOPIC</b>	<b>PAGE NO.</b>
NEUTROPENIA TREATMENT MARKET	326
TABLE 222 GLOBAL NEUTROPENIA DRUG MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	327
FIGURE 45 GLOBAL NEUTROPENIA DRUG MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	327
TABLE 223 KEY DRUGS	327
Neulasta (Pegfilgrastim) and Neupogen (Filgrastim)	328
TABLE 224 GROWTH FACTORS FOR TREATING NEUTROPENIA	329
TABLE 225 WORLDWIDE SALES OF NEULASTA/NEUPOGEN, 2010-2012 (\$ MILLIONS)	329
TABLE 226 SARGRAMOSTIM SALES, 2010 (\$ MILLIONS)	329
Filgrastim Biosimilars	330
TABLE 227 COMPANIES IN EUROPE WITH SHORT-ACTING FILGRASTIMS IN PHASE 3 CLINICAL DEVELOPMENT	330
Teva Pharmaceutical	330
Competition in Neutropenia Market	330
HEMOPHILIA MARKET	331
TABLE 228 HEMOPHILIA A THERAPEUTICS MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	331
FIGURE 46 HEMOPHILIA A THERAPEUTICS MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	331
TABLE 229 KEY PLAYERS IN THE HEMOPHILIA A THERAPEUTICS MARKET	332
Drugs for the Hemophilia Market	332
TABLE 230 KEY HEMOPHILIA DRUGS	333
TABLE 231 GLOBAL MARKET FOR RECOMBINANT COAGULATION FACTORS FOR HEMOPHILIA, 2010 (\$ MILLIONS)	333
FIGURE 47 GLOBAL MARKET FOR RECOMBINANT COAGULATION FACTORS FOR HEMOPHILIA, 2010 (\$ MILLIONS)	333
Market Barriers	334
Drug Pipeline	334
Novo Nordisk Halts Development of Hemophilia Drug	335
Competition	335
Baxter	335
Advate	336
Biogen Idec	336
Blood Disorders Pipeline	336
TABLE 232 GLOBAL BLOOD DISORDERS PIPELINE MOLECULES (%)	336
CONCLUSIONS	337
CHAPTER 13 HEMATOLOGICAL CANCER THERAPIES: MARKET	339
OVERVIEW	339
HEMATOLOGICAL CANCERS DRUG MARKET	339
CLASSIFICATION OF HEMATOLOGIC MALIGNANCIES	339
The Chronic Myeloid Disorders	340
CYTOTOXIC THERAPIES MARKET	340
TABLE 233 CYTOTOXIC THERAPIES MARKET INDICATIONS	340
TABLE 234 LIST OF LEUKEMIA MEDICATIONS	341
TABLE 235 GLOBAL CYTOTHERAPEUTICS MARKET, 2010 AND 2017 (\$ MILLIONS)	342

<b>TOPIC</b>	<b>PAGE NO.</b>
<i>FIGURE 48 GLOBAL CYTOTHERAPEUTICS MARKET, 2010 AND 2017 (\$ MILLIONS)</i>	342
<i>TABLE 236 U.S. CYTOTHERAPEUTICS MARKET, THROUGH 2017 (\$ MILLIONS)</i>	343
<i>FIGURE 49 U.S. CYTOTHERAPEUTICS MARKET, 2010-2017 (\$ MILLIONS)</i>	343
<i>TABLE 237 EUROPEAN CYTOTHERAPEUTICS MARKET, THROUGH 2017 (\$ MILLIONS)</i>	343
<i>FIGURE 50 EUROPEAN CYTOTHERAPEUTICS MARKET, 2010-2017 (\$ MILLIONS)</i>	343
<i>TABLE 238 JAPANESE CYTOTHERAPEUTICS MARKET, THROUGH 2017 (\$ MILLIONS)</i>	344
<i>FIGURE 51 JAPANESE CYTOTHERAPEUTICS MARKET, 2010-2017 (\$ MILLIONS)</i>	345
LEUKEMIA MARKET AND CHALLENGES	345
<i>TABLE 239 MAJOR PLAYERS IN THE LEUKEMIA MARKET</i>	345
Is There an Unmet Need?	346
<i>TABLE 240 LEUKEMIA: CATEGORIES</i>	346
<i>TABLE 241 GLOBAL LEUKEMIA MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	347
<i>FIGURE 52 GLOBAL LEUKEMIA MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	347
GLOBAL LEUKEMIA MARKET	348
<i>TABLE 242 U.S. LEUKEMIA MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	348
<i>FIGURE 53 U.S. LEUKEMIA MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	348
Europe and Leukemia Market	348
<i>TABLE 243 EUROPEAN LEUKEMIA MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	349
<i>FIGURE 54 EUROPEAN LEUKEMIA MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	349
Japan	349
<i>TABLE 244 JAPAN'S LEUKEMIA MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	350
<i>FIGURE 55 JAPAN'S LEUKEMIA MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	350
<i>TABLE 245 GLOBAL LEUKEMIA MARKET BY GEOGRAPHICAL REGIONS: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	350
<i>FIGURE 56 GLOBAL LEUKEMIA MARKET BY GEOGRAPHICAL REGIONS: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	351
<i>TABLE 246 LEUKEMIA MARKET SHARE FORECAST, 2011-2017 (% SHARE)</i>	352
CHRONIC MYELOGENOUS LEUKEMIA (CML) MARKET	352
<i>TABLE 247 CHRONIC MYELOGENOUS LEUKEMIA (CML) MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	352
<i>FIGURE 57 CHRONIC MYELOGENOUS LEUKEMIA (CML) MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	352
Market Trends and Therapeutic Drugs	353
<i>TABLE 248 DRUG CLASSES FOR LEUKEMIA DRUG DEVELOPMENT</i>	354
<i>TABLE 249 KEY CHRONIC MYELOGENOUS LEUKEMIA (CML) SALES AND FORECAST, 2010-2012 (\$ MILLIONS)</i>	355
<i>FIGURE 58 KEY CHRONIC MYELOGENOUS LEUKEMIA (CML) SALES AND FORECAST, 2010-2012 (\$ MILLIONS)</i>	355
Market Trends	355

<b>TOPIC</b>	<b>PAGE NO.</b>
Gleevec	356
<i>TABLE 250 KEY CML MEDICINES AND COST</i>	356
<i>TABLE 251 GLEEVAC: FDA APPROVALS</i>	357
Tasigna	357
Sprycel	357
Combination Treatment	358
New Drugs for CML	358
<b>DRUG PROFILES</b>	359
Bosulif	359
Synribo	359
Bafetinib	360
Rebastinib /DCC-2036	360
Danusertib	360
<i>TABLE 252 PIPELINE DRUGS FOR LEUKEMIA</i>	361
Ponatinib	361
<b>ACUTE LYMPHOCYTIC LEUKEMIA MARKET</b>	362
<i>TABLE 253 ACUTE LYMPHOCYTIC LEUKEMIA THERAPEUTICS MARKET, THROUGH 2017 (\$ MILLIONS)</i>	362
<i>FIGURE 59 ACUTE LYMPHOCYTIC LEUKEMIA THERAPEUTICS MARKET, 2010-2017 (\$ MILLIONS)</i>	362
<i>TABLE 254 MAJOR PLAYERS IN THE ACUTE LYMPHOCYTIC LEUKEMIA THERAPEUTICS MARKET</i>	363
Acute Lymphocytic Leukemia and Children	363
Therapeutics	363
<i>TABLE 255 DRUGS FOR ALL TREATMENT</i>	364
<b>DRUG PROFILES</b>	364
Clolar	364
Oncaspar	364
Nelarabine	365
Marqibo	365
<i>TABLE 256 APPROVED DRUGS FOR ALL</i>	365
Graspa	365
<b>ACUTE MYELOID LEUKEMIA (AML) MARKET</b>	366
<i>TABLE 257 GLOBAL ACUTE MYELOID LEUKEMIA MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	366
<i>FIGURE 60 GLOBAL ACUTE MYELOID LEUKEMIA MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	366
Therapeutic Drugs	367
Elacytarabine	367
Quizartinib	367
Key Companies	368
<i>TABLE 258 KEY COMPANIES IN THE AML MARKET</i>	368
New Developments	368
Astex Pharmaceuticals	368
Acute Myeloid Leukemia and Children	369
<b>CHRONIC LYMPHOCYTIC LEUKEMIA (CLL) MARKET</b>	369
<i>TABLE 259 CHRONIC LYMPHOCYTIC LEUKEMIA (CLL) MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	370

<b>TOPIC</b>	<b>PAGE NO.</b>
<i>FIGURE 61 CHRONIC LYMPHOCYTIC LEUKEMIA (CLL) MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	370
Therapeutic Drugs	370
<i>TABLE 260 ARZERRA: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	371
Arzerra	371
Fludara	371
Campath	372
Treanda	372
<i>TABLE 261 TREANDA SALES, THROUGH 2017 (\$ MILLIONS)</i>	372
Pipeline	373
GDC-0199 (RG7601)	373
NOX-A12 anti-CXCL12/SDF-1/ Spiegelmer	373
Ibrutinib	374
GS-1101	375
Key Players	376
<i>TABLE 262 KEY PLAYERS IN THE CLL MARKET</i>	376
NEW DEVELOPMENTS	376
LYMPHOMA DRUG MARKET	376
Market Trends	377
<i>TABLE 263 TREATMENT GENERIC DRUGS USED IN COMBINATION FOR HODGKIN LYMPHOMA</i>	377
<i>TABLE 264 TREATMENT DRUGS USED IN COMBINATION FOR NON-HODGKIN LYMPHOMA</i>	377
Non-Hodgkin's Lymphoma Drug Market	378
<i>TABLE 265 NON-HODGKIN'S LYMPHOMA DRUG MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	378
<i>FIGURE 62 NON-HODGKIN'S LYMPHOMA DRUG MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	378
Rituximab	379
<i>TABLE 266 RITUXIMAB SALES AND FORECAST, 2010-2012 (\$ MILLIONS)</i>	379
Rituxan Biosimilars Development and Key Companies	380
<i>TABLE 267 RITUXAN: BIOSIMILARS IN DEVELOPMENT</i>	380
New Drugs	381
Revlimid	381
<i>TABLE 268 REVLIMID SALES AND FORECAST, 2011 AND 2012 (\$ MILLIONS)</i>	381
Pipeline Drugs	382
HODGKIN'S LYMPHOMA TREATMENT MARKET	382
<i>TABLE 269 HODGKIN'S LYMPHOMA TREATMENT MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	383
<i>FIGURE 63 HODGKIN'S LYMPHOMA TREATMENT MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	383
Market Dynamics and Pipeline	383
Adcetris /Brentuximab Vedotin	384
Panobinostat	384
MULTIPLE MYELOMA TREATMENT MARKET	385
<i>TABLE 270 MULTIPLE MYELOMA TREATMENT MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)</i>	385
<i>FIGURE 64 MULTIPLE MYELOMA TREATMENT MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)</i>	385

<b>TOPIC</b>	<b>PAGE NO.</b>
<i>TABLE 271 DRUGS FOR THE MYELOMA MARKET</i>	386
Kyprolis	386
Revlimid	387
Velcade	388
Pomalidomide	388
Pipeline Drug Candidates	388
<i>TABLE 272 DRUGS IN DEVELOPMENT</i>	389
Obatoclax	389
Perifosine	389
Panobinostat (Faridak)	389
Aplidin	390
Treanda	390
<i>TABLE 273 TREANDA CLINICAL TRIALS IN RELAPSED AND/OR REFRACTORY MYELOMA</i>	390
MYELOYDYSPLASTIC SYNDROME: MARKET	390
<i>TABLE 274 MARKET FOR MYELOYDYSPLASTIC SYNDROME, THROUGH 2017 (\$ MILLIONS)</i>	391
<i>FIGURE 65 MARKET FOR MYELOYDYSPLASTIC SYNDROME, 2010-2017 (\$ MILLIONS)</i>	391
MDS Therapies	391
<i>TABLE 275 APPROVED DRUGS FOR THE TREATMENT OF MDS</i>	392
Decitabine	392
Vidaza	392
Pipeline	393
MYELOPROLIFERATIVE DISORDERS	393
<i>TABLE 276 MARKET FOR MYELOPROLIFERATIVE DISORDERS, THROUGH 2017 (\$ MILLIONS)</i>	393
<i>FIGURE 66 MARKET FOR MYELOPROLIFERATIVE DISORDERS, 2010-2017 (\$ MILLIONS)</i>	393
Market Trends	394
<i>TABLE 277 JAK2 INHIBITORS IN DEVELOPMENT</i>	394
Ruxolitinib	395
Market	395
<i>TABLE 278 RUXOLITINIB FORECAST, 2012 AND 2017 (\$ MILLIONS)</i>	395
TG101348	396
AZD1480	396
R723	396
XL019	396
CYT387	397
SB1518	397
MARKET FOR ESSENTIAL THROMBOCYTOSIS (ET)	398
MYELOFIBROSIS	398
<i>TABLE 279 MARKET FOR MYELOFIBROSIS, THROUGH 2017 (\$ MILLIONS)</i>	398
<i>FIGURE 67 MARKET FOR MYELOFIBROSIS, 2010-2017 (\$ MILLIONS)</i>	398
Treatment Options for Myelofibrosis	399
POLYCYTHEMIA VERA (PV) THERAPEUTICS MARKET	399
<i>TABLE 280 MARKET FOR POLYCYTHEMIA VERA, THROUGH 2017 (\$ MILLIONS)</i>	399
<i>FIGURE 68 MARKET FOR POLYCYTHEMIA VERA, 2010-2017 (\$ MILLIONS)</i>	400

<b>TOPIC</b>	<b>PAGE NO.</b>
Treatment Expense	400
<hr/>	
CHAPTER 14 PATENT LANDSCAPE AND CURRENT DEVELOPMENTS	402
<i>TABLE 281 MAJOR DRUGS: PATENT EXPIRY</i>	402
<i>TABLE 282 KEY DRUGS: PATENT EXPIRY</i>	403
<i>TABLE 283 DRUGS LOSING PATENT PROTECTION BY 2015 AND THEIR GLOBAL SALES IN 2010 (\$ MILLIONS)</i>	403
HEMATOLOGICAL CANCER DRUGS: PATENT EXPIRY	404
<i>TABLE 284 BIOLOGICS: PATENT EXPIRY</i>	404
NEW APPROVALS	406
<i>TABLE 285 NEW DRUG APPROVALS FOR BLOOD DISORDERS, 2012</i>	406
NEW HEMATOLOGICAL CANCER DRUGS	407
<i>TABLE 286 NEW DRUG APPROVALS FOR HEMATOLOGICAL CANCERS, 2012</i>	408
NEWS AND DEVELOPMENT	408
TYPE 2 DIABETES LINKED TO INCREASED BLOOD CANCER RISK	408
NOVARTIS AND PATENT ISSUES	409
DRUGS IN DEVELOPMENT	410
ARIAD PHARMACEUTICALS	410
PHARMACYCLICS	410
AICURIS	410
CELL THERAPEUTICS	410
BIOGEN IDEC/SWEDISH ORPHAN BIOVITRUM	411
INSPIRATION BIOPHARMACEUTICALS	411
NOVARTIS	411
MERCK	411
THE MEDICINES COMPANY	412
ISIS PHARMACEUTICALS	412
CYTOPHARM AND AMARILLO BIOSCIENCES	412
SUPPREMOL	413
MORPHOSYS AND XENCOR	413
ARIAD PHARMACEUTICALS	413
OTHER DEVELOPMENTS	413
UNIVERSAL CANCER BLOOD TEST	413
BOEHRINGER INGELHEIM	414
SHIRE	415
JANSSEN BIOTECH	415
OTHER MERGERS	415
BLOOD DISORDERS NEWS	416
AMAG PHARMACEUTICALS	416
AFFYMAX VS. AMGEN	416
ACQUISITIONS	417
GILEAD SCIENCES	417
<hr/>	
CHAPTER 15 SELECTED COMPANY PROFILES	419
ABBOTT LABORATORIES	419
ABON PHARMACEUTICALS	419
AMBIT BIOSCIENCES	419
AMGEN	420



<b>TOPIC</b>	<b>PAGE NO.</b>
AMPHASTAR PHARMACEUTICALS	420
ARIAD PHARMACEUTICALS	420
ASTELLAS PHARMA US	421
ASTRAZENECA	421
BAXTER HEALTHCARE CORPORATION	422
BAYER HEALTHCARE PHARMACEUTICALS	422
BIOGEN IDEC	422
BOEHRINGER INGELHEIM GMBH	423
BRISTOL-MYERS SQUIBB	423
C.R. BARD	424
CELGENE CORPORATION	424
CZ BIOMED CORP.	424
DECIPHERA PHARMACEUTICALS	425
DIAGNOCURE	425
EISAI INC.	425
ELI LILLY AND COMPANY	426
ENZON PHARMACEUTICALS	426
EXELIXIS	426
GE HEALTHCARE	427
GENMAB INC.	428
GILEAD SCIENCES	428
GLAXOSMITHKLINE	429
HOLOGIC	429
HORIBA LTD.	429
JOHNSON & JOHNSON	430
MEDKOO BIOSCIENCES	430
MOMENTA PHARMACEUTICALS	431
NOXXON PHARMA AG	431
OPKO HEALTH	431
PFIZER	432
PHARMACYCLICS	432
PORTOLA PHARMACEUTICALS INC.	432
ROCHE DIAGNOSTICS	433
SANOFI	433
SIEMENS AG	434
SPECTRUM PHARMACEUTICALS	434
TEVA PHARMACEUTICAL INDUSTRIES LTD.	434
THE MEDICINES COMPANY	435
WATSON PHARMACEUTICALS INC.	435
YM BIOSCIENCES INC.	436
CHAPTER 16 REFERENCES	438

**LIST OF TABLES**

<b>TABLE HEADING</b>	<b>PAGE NO.</b>
SUMMARY TABLE HEMATOLOGICAL DISORDERS DRUGS AND DIAGNOSTICS: GLOBAL MARKETS, THROUGH 2017 (\$ MILLIONS)	6
TABLE 1 KEY BLOOD DISORDERS	9
TABLE 2 MALIGNANT BLOOD DISORDERS	10
TABLE 3 NON-MALIGNANT BLOOD DISORDERS	10
TABLE 4 TYPE OF BLOOD CELLS AND FUNCTIONS	11
TABLE 5 BLOOD CELLS AND FUNCTION	12
TABLE 6 THREE MAJOR TYPES OF ANEMIA	13
TABLE 7 ANEMIA: MAJOR CATEGORIES	14
TABLE 8 SYMPTOMS OF ANEMIA	15
TABLE 9 TYPES OF ANEMIA	16
TABLE 10 DRUGS THAT CAN CAUSE COBALAMIN DEFICIENCY	18
TABLE 11 DRUGS: CAUSE OF FOLATE DEFICIENCY	19
TABLE 12 KEY FACTS	22
TABLE 13 LAB TESTS FOR ANEMIA	23
TABLE 14 HEMOSTASIS: THREE MAJOR STEPS	26
TABLE 15 DRUGS THAT EFFECT ACTIVITY OF PLATELETS	28
TABLE 16 ANTICOAGULANTS THAT ACT ON THROMBIN	28
TABLE 17 BLEEDING DISORDERS	29
TABLE 18 BLEEDING DISORDERS: SYMPTOMS	30
TABLE 19 SIGNS AND TESTS	30
TABLE 20 KEY CHARACTERISTICS: HEMOPHILIA	31
TABLE 21 FVIII INHIBITORS	39
TABLE 22 MEDICATIONS FOR TREATING HEMOPHILIA	40
TABLE 23 FACTOR VIII PRODUCTS	41
TABLE 24 ANTIFIBRINOLYTICS	41
TABLE 25 ANTIHEMOPHILIC AGENTS	42
TABLE 26 FORMATION OF THROMBUS	46
TABLE 27 CAUSES FOR NEUTROPENIA	53
TABLE 28 WHITE BLOOD CELLS AND DISEASES	55
TABLE 29 CAUSE OF SECONDARY THROMBOCYTOSIS	58
TABLE 30 DIAGNOSTIC TESTS	59
TABLE 31 MEDICINES FOR THROMBOCYTHEMIA	60
TABLE 32 CAUSES OF THROMBOCYTOPENIA	61
TABLE 33 SIGNS OF EXTERNAL BLEEDING	63
TABLE 34 COMMON DRUGS TO TREAT EOSINOPHILIA	64
TABLE 35 HEMATOLOGICAL CANCERS (BLOOD CANCERS)	67
TABLE 36 RELATIVE OCCURRENCE OF HEMATOLOGICAL MALIGNANCIES IN THE U.S. (%)	68
TABLE 37 TYPES OF HEMATOLOGICAL CANCERS	69
TABLE 38 FDA APPROVED DRUGS FOR HEMATOLOGY, 2012	73
TABLE 39 NEW HEMATOLOGY DRUG APPROVALS, 2012	73
TABLE 40 FDA APPROVED DRUGS FOR HEMATOLOGY, 2011	74
TABLE 41 APPROVED FDA DRUGS FOR HEMATOLOGICAL DISEASES, 1996-2010	75
TABLE 42 TYPES OF LEUKEMIA	80
TABLE 43 TYPES OF LEUKEMIA AND KEY FEATURES	81
TABLE 44 DIAGNOSTIC EXAMS FOR LEUKEMIA	85

<b>TABLE HEADING</b>	<b>PAGE NO.</b>
TABLE 45 ADDITIONAL TESTS	86
TABLE 46 PCR TESTS	89
TABLE 47 NON-LABORATORY TESTS	89
TABLE 48 COMMON TREATMENTS USED TO FIGHT LEUKEMIA	90
TABLE 49 NEWER CLASSES OF DRUGS	91
TABLE 50 ACUTE LYMPHOBLASTIC LEUKEMIA (ALL) TREATMENT	93
TABLE 51 DRUGS APPROVED FOR ACUTE LYMPHOBLASTIC LEUKEMIA (ALL)	94
TABLE 52 DRUGS APPROVED FOR CHRONIC LYMPHOCYTIC LEUKEMIA (CLL)	95
TABLE 53 DRUGS APPROVED FOR ACUTE MYELOID LEUKEMIA (AML)	96
TABLE 54 DRUGS APPROVED FOR CHRONIC MYELOGENOUS LEUKEMIA (CML)	97
TABLE 55 T-CELL PROLYMPHOCYTIC LEUKEMIA: TREATMENT PLAN	98
TABLE 56 FACTORS AFFECTING LEUKEMIA STAGING AND PROGNOSIS	99
TABLE 57 CHEMOTHERAPY DRUGS FOR CML	101
TABLE 58 CHEMOTHERAPY DRUGS FOR CLL	101
TABLE 59 TARGETED THERAPY DRUGS	102
TABLE 60 ADVANTAGES OF RADIOIMMUNOTHERAPY	103
TABLE 61 COMMON RADIATION TREATMENTS: LEUKEMIA	104
TABLE 62 PAIN MEDICATIONS	105
TABLE 63 EMERGING THERAPIES FOR LEUKEMIA	106
TABLE 64 CAUSES FOR LYMPHOMA	111
TABLE 65 LYMPHOMA TYPES	112
TABLE 66 STAGING FOR HL AND NHL TUMORS	114
TABLE 67 MATURE B-CELL NEOPLASMS	115
TABLE 68 MATURE T-CELL AND NATURAL KILLER (NK) CELL NEOPLASMS	115
TABLE 69 HODGKIN LYMPHOMA	116
TABLE 70 IMMUNODEFICIENCY-ASSOCIATED LYMPHO- PROLIFERATIVE DISORDERS	116
TABLE 71 SYMPTOMS OF LYMPHOMA	117
TABLE 72 FIVE-YEAR RELATIVE SURVIVAL BY STAGE AT DIAGNOSIS (%)	117
TABLE 73 IMAGING TESTS	118
TABLE 74 HL, THE INTERNATIONAL PROGNOSTIC INDEX	119
TABLE 75 THE INTERNATIONAL PROGNOSTIC INDEX FOR NHL	120
TABLE 76 PROMISING THERAPIES FOR TREATING LYMPHOMA	122
TABLE 77 PROGNOSTIC INDICATORS FOR MYELOMA	129
TABLE 78 OTHER BONE MARROW TESTS	130
TABLE 79 MYELOMA: STAGING CRITERIA	132
TABLE 80 MYELOMA'S RESPONSE TO TREATMENT	133
TABLE 81 SUPPORTIVE CARE	135
TABLE 82 DRUGS FOR MULTIPLE MYELOMA	137
TABLE 83 EMERGING THERAPIES FOR MYELOMA	138
TABLE 84 CHARACTERISTICS OF MDS	140
TABLE 85 MDS CAUSES	141
TABLE 86 MDS OR AML: THREE CATEGORIES	142
TABLE 87 MYELOYDYSPLASTIC SYNDROMES: KEY FACTS	142
TABLE 88 FAB CLASSIFICATION OF MDS	143
TABLE 89 THE 2008 WHO CLASSIFICATION OF MDS	144
TABLE 90 INTERNATIONAL PROGNOSTIC SCORING SYSTEM RISK GROUPS AND PROGNOSIS	145

<b>TABLE HEADING</b>	<b>PAGE NO.</b>
TABLE 91 CHANGES IN CELLS AND MDS	146
TABLE 92 CHRONIC MYELOPROLIFERATIVE DISORDERS	153
TABLE 93 CLASSIFICATION OF MYELOID NEOPLASMS ACCORDING TO THE 2008 WHO CLASSIFICATION SCHEME	155
TABLE 94 MYELOPROLIFERATIVE NEOPLASMS: KEY FACTS	156
TABLE 95 DIAGNOSTIC TESTS	157
TABLE 96 SYMPTOMS OF POLYCYTHEMIA VERA	159
TABLE 97 BLOOD TESTS FOR POLYCYTHEMIA VERA	160
TABLE 98 TREATMENT FOR POLYCYTHEMIA VERA	161
TABLE 99 CAUSATIVE FACTORS FOR MYELOFIBROSIS	163
TABLE 100 COMPLICATIONS FROM MYELOFIBROSIS	163
TABLE 101 WHO DIAGNOSTIC CRITERIA FOR PMF	165
TABLE 102 RISK FACTORS	166
TABLE 103 IDIOPATHIC MYELOFIBROSIS AND SYMPTOMS	167
TABLE 104 PROGNOSIS	167
TABLE 105 TREATMENT OF CHRONIC IDIOPATHIC MYELOFIBROSIS	169
TABLE 106 SOMATIC MUTATIONS	170
TABLE 107 CAUSES OF THROMBOCYTOSIS	171
TABLE 108 SYMPTOMS	172
TABLE 109 ESSENTIAL THROMBOCYTHEMIA: DIAGNOSTIC CRITERIA	173
TABLE 110 TREATMENT OF ET	176
TABLE 111 TREATMENT OF CHRONIC NEUTROPHILIC LEUKEMIA	180
TABLE 112 CHRONIC EOSINOPHILIC LEUKEMIA: SYMPTOMS	180
TABLE 113 TREATMENT OF CHRONIC EOSINOPHILIC LEUKEMIA	181
TABLE 114 CURRENT DRUGS	183
TABLE 115 CANCER KEY FACTS	185
TABLE 116 INCREASE IN CANCER BURDEN: FACTORS	186
TABLE 117 CANCER CASES AND TREATMENT COST IN INDIA, 2008-2010 (\$ MILLIONS)	188
TABLE 118 WORLDWIDE INCIDENCE OF BLOOD CANCER, 2008 (IN THOUSANDS)	189
TABLE 119 WORLDWIDE INCIDENCE OF BLOOD CANCER IN MEN, 2008 (THOUSANDS)	189
TABLE 120 WORLDWIDE INCIDENCE OF BLOOD CANCER IN WOMEN, 2008 (THOUSANDS)	190
TABLE 121 TOP 10 COUNTRIES' CANCER RATES (PER 100,000)	190
TABLE 122 ESTIMATED INCIDENCE RATES FOR BLOOD CANCERS IN THE U.S., 2010 AND 2011 (PER 100,000 POPULATION)	191
TABLE 123 ESTIMATED NEW CASES OF LEUKEMIA, LYMPHOMA AND MYELOMA IN THE U.S., 2011	192
TABLE 124 ESTIMATED LEUKEMIA AND LYMPHOMA INCIDENCE IN THE U.S., 2012	193
TABLE 125 GLOBAL INCIDENCE OF LEUKEMIA, 2010 (PER 100,000 INDIVIDUALS)	196
TABLE 126 LEUKEMIA INCIDENCE IN THE U.S.	197
TABLE 127 ESTIMATED NEW CASES OF LEUKEMIA IN THE U.S., 2010-2012 (NO. OF CASES)	198
TABLE 128 ESTIMATED NEW CASES OF LEUKEMIA IN THE U.S., ADULTS AND CHILDREN, 2011 (%/NO. OF CASES)	198

<b>TABLE HEADING</b>	<b>PAGE NO.</b>
TABLE 129 APPROXIMATE PREVALENCE OF DIFFERENT TYPES OF LEUKEMIA IN THE U.S., 2008 (NO. OF CASES)	199
TABLE 130 LEUKEMIA IN ADULTS AND CHILDREN IN THE U.S., 2011 (NO. OF CASES)	200
TABLE 131 TYPES OF LEUKEMIA IN ADULTS IN THE U.S.	201
TABLE 132 ESTIMATED LEUKEMIA INCIDENCE IN THE U.S., 2012 (NO OF CASES)	202
TABLE 133 INCIDENCE RATES BY RACE, 2005-2009 (PER 100,000 PERSONS)	202
TABLE 134 THE FIVE-YEAR RELATIVE SURVIVAL RATES, 2001-2007	203
TABLE 135 ESTIMATED DEATHS FOR LEUKEMIA IN THE U.S., 2011	204
TABLE 136 LEUKEMIA STATISTICS IN THE U.K.: NUMBER OF NEW CASES, INCIDENCE RATES BY GENDER PER 100,000 POPULATION, 2008	205
TABLE 137 ACS ESTIMATES FOR ACUTE LYMPHOCYTIC LEUKEMIA (ALL) INCIDENCE IN THE U.S., 2012	207
TABLE 138 ESTIMATED NON-HODGKIN LYMPHOMA STATISTICS: WORLDWIDE, 2008 (INCIDENCE RATES PER 100,000 POPULATION)	210
TABLE 139 ESTIMATED NON-HODGKIN LYMPHOMA STATISTICS: WORLDWIDE, 2008 (MORTALITY RATES PER 100,000 POPULATION)	211
TABLE 140 HODGKIN LYMPHOMA WORLDWIDE, 2008 (ESTIMATED INCIDENCE RATES PER 100,000 POPULATION)	213
TABLE 141 ESTIMATED NON-HODGKIN LYMPHOMA STATISTICS: EU-27 COUNTRIES, 2008 (AGE-STANDARDIZED INCIDENCE RATES PER 100,000)	215
TABLE 142 ESTIMATED NON-HODGKIN LYMPHOMA STATISTICS: EU-27 COUNTRIES, 2008 (AGE-STANDARDIZED MORTALITY RATES PER 100,000)	217
TABLE 143 HODGKIN LYMPHOMA IN EU-27 COUNTRIES, 2008 (ESTIMATED INCIDENCE RATES PER 100,000)	219
TABLE 144 ESTIMATED NEW CASES AND DEATHS FOR LYMPHOMA IN THE U.S., 2012 (NO. OF CASES)	221
TABLE 145 ESTIMATED NEW CASES AND DEATHS OF LYMPHOMA IN THE U.S., 2011 AND 2012 (NO. OF CASES)	222
TABLE 146 ESTIMATED NEW CASES OF LYMPHOMA TYPES IN THE U.S., 2011 AND 2012 (NO. OF CASES)	223
TABLE 147 NEW CASES OF LYMPHOMA BY GENDER, 2011 (NO. OF CASES)	224
TABLE 148 ESTIMATED DEATHS FROM LYMPHOMA BY GENDER, 2011 (NO. OF CASES)	224
TABLE 149 AGE-SPECIFIC INCIDENCE RATES, BY GENDER, FOR NHL	225
TABLE 150 INCIDENCE RATES BY RACE, 2005-2009 (PER 100,000 PEOPLE)	226
TABLE 151 DEATH RATES BY RACE, 2005-2009 (PER 100,000 PEOPLE)	226
TABLE 152 STAGE DISTRIBUTION AND FIVE-YEAR RELATIVE SURVIVAL BY STAGE AT DIAGNOSIS, 2002-2008 (ALL RACES, BOTH SEXES, %)	229
TABLE 153 NON-HODGKIN LYMPHOMA IN THE U.K.: NUMBER OF NEW CASES, INCIDENCE, 2009 (RATES PER 100,000 POPULATION)	229
TABLE 154 NON-HODGKIN LYMPHOMA DEATH IN THE U.K. MORTALITY, 2010 (RATES PER 100,000 POPULATION)	230
TABLE 155 ESTIMATED HODGKIN LYMPHOMA STATISTICS IN THE U.K., 2008 (NUMBER OF NEW CASES, PER 100,000 POPULATION)	231
TABLE 156 HODGKIN'S LYMPHOMA IN THE U.K., 2008 (ESTIMATED NUMBER OF DEATHS PER 100,000 POPULATION)	232
TABLE 157 MYELOMA INCIDENCE WORLDWIDE, 2008 (ESTIMATED INCIDENCE RATES PER 100,000 POPULATION)	234
TABLE 158 MYELOMA MORTALITY RATES WORLD WIDE, 2008 (ESTIMATED INCIDENCE RATES; PER 100,000 POPULATION)	235

<b>TABLE HEADING</b>	<b>PAGE NO.</b>
TABLE 159 MYELOMA INCIDENCE RATES, EU-27 COUNTRIES, 2008 (ESTIMATED INCIDENCE RATES; PER 100,000 POPULATION)	237
TABLE 160 MYELOMA MORTALITY RATES WORLD WIDE, 2008 (ESTIMATED MORTALITY RATES; PER 100,000 POPULATION)	238
TABLE 161 ESTIMATED INCIDENCE AND DEATHS FOR MYELOMA IN THE U.S., 2011 AND 2012 (NO. OF CASES)	240
TABLE 162 ESTIMATED INCIDENCE OF MYELOMA IN THE U.S. BY GENDER, 2011 AND 2012 (NO. OF CASES)	241
TABLE 163 INCIDENCE RATES BY RACE AND GENDER, 2005-2009 (PER 100,000 PEOPLE)	242
TABLE 164 DEATH RATES BY RACE AND GENDER, 2005-2009 (PER 100,000 PEOPLE)	243
TABLE 165 DISTRIBUTION AND FIVE-YEAR RELATIVE SURVIVAL BY STAGE AT DIAGNOSIS, 2002-2008 (ALL RACES, BOTH SEXES, %)	244
TABLE 166 MYELOMA STATISTICS IN THE U.K. NUMBER OF NEW CASES: INCIDENCE RATES PER 100,000 POPULATION, 2009	244
TABLE 167 MYELOMA NUMBER OF DEATHS IN THE U.K. MORTALITY RATES PER 100,000 POPULATION, 2010	245
TABLE 168 ESTIMATED NEW CASES FOR MDS IN THE U.S., 2012	247
TABLE 169 GLOBAL HEMATOLOGY INSTRUMENTS AND REAGENTS MARKET, THROUGH 2017 (\$ MILLIONS)	257
TABLE 170 KEY PRODUCTS	259
TABLE 171 GLOBAL MAJOR PLAYERS IN THE HEMATOLOGY MARKET	260
TABLE 172 FLOW CYTOMETRY 171: KEY PLAYERS	262
TABLE 173 FLOW CYTOMETRY PRODUCTS: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	262
TABLE 174 MAJOR FLOW CYTOMETRY APPLICATIONS	263
TABLE 175 CELL ANALYZERS: KEY PLAYERS	264
TABLE 176 HEMATOLOGY TESTS	266
TABLE 177 COMPLETE BLOOD COUNT: COMPONENTS MEASURED	267
TABLE 178 TESTS INCLUDED IN A CHEMISTRY SCREEN	268
TABLE 179 CHEMISTRY SCREEN	269
TABLE 180 URINE TESTS AND APPLICATIONS	270
TABLE 181 IVD PRODUCTS MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	272
TABLE 182 UNITED STATES: IVD MARKET SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	273
TABLE 183 GLOBAL MARKET FOR IMMUNOASSAY SYSTEMS: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	274
TABLE 184 GLOBAL MARKET FOR ENZYME IMMUNOASSAY SYSTEMS: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	275
TABLE 185 KEY PLAYERS IN THE IMMUNOASSAYS MARKET	276
TABLE 186 MOLECULAR DIAGNOSTICS MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	277
TABLE 187 MAJOR PLAYERS: MOLECULAR DIAGNOSTICS MARKET	278
TABLE 188 THE POINT-OF-CARE (POC) TESTING MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	278
TABLE 189 GLOBAL MARKET FOR POC TESTS: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	279
TABLE 190 THE POINT-OF-CARE IMMUNOASSAY MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	281

<b>TABLE HEADING</b>	<b>PAGE NO.</b>
TABLE 191 MARKET PLAYERS	283
TABLE 192 GLOBAL BLOOD DISORDER MARKET, THROUGH 2017 (\$ MILLIONS)	285
TABLE 193 GLOBAL BLOOD DISORDER MARKET SHARE, 2010 AND 2017 (%)	286
TABLE 194 PATENT EXPIRIES OF MAJOR BLOCKBUSTERS	287
TABLE 195 KEY PLAYERS: PRODUCTS AND MARKET SHARE, 2010 (%)	287
TABLE 196 MARKET DRIVERS	288
TABLE 197 MARKET RESTRAINTS	288
TABLE 198 ANEMIA TREATMENT MARKET, THROUGH 2017 (\$ MILLIONS)	289
TABLE 199 ERYTHROPOIETIN STIMULATING AGENTS (ESAS)	290
TABLE 200 KEY ANEMIA DRUGS SALES, 2010-2012 (\$ MILLIONS)	290
TABLE 201 NEORECORMON/EPOGIN SALES AND FORECAST, 2010-2012 (\$ MILLIONS)	293
TABLE 202 GLOBAL NEORECORMON/EPOGIN SALES, 2009 (\$ MILLIONS/%)	294
TABLE 203 COMMON ANEMIA TREATMENTS	295
TABLE 204 AKEBIA THERAPEUTICS ANEMIA DRUG IN DEVELOPMENT-AKB-6548	299
TABLE 205 GLOBAL THROMBOSIS THERAPEUTIC MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	300
TABLE 206 LEADING DRUGS IN THE ANTITHROMBOTIC AGENTS MARKET	301
TABLE 207 GLOBAL ANTICOAGULANT DRUG MARKET SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	304
TABLE 208 GLOBAL ANTIPLATELET DRUG MARKET, THROUGH 2017 (\$ MILLIONS)	305
TABLE 209 ANTIPLATELET AND ANTICOAGULANT DRUGS	306
TABLE 210 ANTIPLATELET DRUGS (PLATELET ADP ANTAGONISTS): SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	309
TABLE 211 U.S. SALES: PLAVIX, 2012 (\$ MILLIONS)	310
TABLE 212 GLOBAL SEMULOPARIN SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	311
TABLE 213 ANTITHROMBOTIC AGENTS (BY PHARMACOLOGICAL CLASS): SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	313
TABLE 214 XARELTO: APPROVALS IN VENOUS ARTERIAL THROMBOEMBOLIC (VAT) INDICATIONS	316
TABLE 215 ANTITHROMBOTIC AGENTS IN DEVELOPMENT	318
TABLE 216 ACTIVASE: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	319
TABLE 217 ANGIOMAX: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	320
TABLE 218 KEY PLATELET AGGREGATION INHIBITOR DRUG SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	321
TABLE 219 PLATELET AGGREGATION INHIBITORS: PIPELINE DRUGS	323
TABLE 220 PLATELET INHIBITOR: PIPELINE DRUGS	324
TABLE 221 THROMBOSIS MARKET: PIPELINE DRUGS	325
TABLE 222 GLOBAL NEUTROPENIA DRUG MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	327
TABLE 223 KEY DRUGS	327
TABLE 224 GROWTH FACTORS FOR TREATING NEUTROPENIA	329
TABLE 225 WORLDWIDE SALES OF NEULASTA/NEUPOGEN, 2010-2012 (\$ MILLIONS)	329
TABLE 226 SARGRAMOSTIM SALES, 2010 (\$ MILLIONS)	329
TABLE 227 COMPANIES IN EUROPE WITH SHORT-ACTING FILGRASTIMS IN PHASE 3 CLINICAL DEVELOPMENT	330

<b>TABLE HEADING</b>	<b>PAGE NO.</b>
TABLE 228 HEMOPHILIA A THERAPEUTICS MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	331
TABLE 229 KEY PLAYERS IN THE HEMOPHILIA A THERAPEUTICS MARKET	332
TABLE 230 KEY HEMOPHILIA DRUGS	333
TABLE 231 GLOBAL MARKET FOR RECOMBINANT COAGULATION FACTORS FOR HEMOPHILIA, 2010 (\$ MILLIONS)	333
TABLE 232 GLOBAL BLOOD DISORDERS PIPELINE MOLECULES (%)	336
TABLE 233 CYTOTOXIC THERAPIES MARKET INDICATIONS	340
TABLE 234 LIST OF LEUKEMIA MEDICATIONS	341
TABLE 235 GLOBAL CYTOTHERAPEUTICS MARKET, 2010 AND 2017 (\$ MILLIONS)	342
TABLE 236 U.S. CYTOTHERAPEUTICS MARKET, THROUGH 2017 (\$ MILLIONS)	343
TABLE 237 EUROPEAN CYTOTHERAPEUTICS MARKET, THROUGH 2017 (\$ MILLIONS)	343
TABLE 238 JAPANESE CYTOTHERAPEUTICS MARKET, THROUGH 2017 (\$ MILLIONS)	344
TABLE 239 MAJOR PLAYERS IN THE LEUKEMIA MARKET	345
TABLE 240 LEUKEMIA: CATEGORIES	346
TABLE 241 GLOBAL LEUKEMIA MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	347
TABLE 242 U.S. LEUKEMIA MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	348
TABLE 243 EUROPEAN LEUKEMIA MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	349
TABLE 244 JAPAN'S LEUKEMIA MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	350
TABLE 245 GLOBAL LEUKEMIA MARKET BY GEOGRAPHICAL REGIONS: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	350
TABLE 246 LEUKEMIA MARKET SHARE FORECAST, 2011-2017 (% SHARE)	352
TABLE 247 CHRONIC MYELOGENOUS LEUKEMIA (CML) MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	352
TABLE 248 DRUG CLASSES FOR LEUKEMIA DRUG DEVELOPMENT	354
TABLE 249 KEY CHRONIC MYELOGENOUS LEUKEMIA (CML) SALES AND FORECAST, 2010-2012 (\$ MILLIONS)	355
TABLE 250 KEY CML MEDICINES AND COST	356
TABLE 251 GLEEVAC: FDA APPROVALS	357
TABLE 252 PIPELINE DRUGS FOR LEUKEMIA	361
TABLE 253 ACUTE LYMPHOCYTIC LEUKEMIA THERAPEUTICS MARKET, THROUGH 2017 (\$ MILLIONS)	362
TABLE 254 MAJOR PLAYERS IN THE ACUTE LYMPHOCYTIC LEUKEMIA THERAPEUTICS MARKET	363
TABLE 255 DRUGS FOR ALL TREATMENT	364
TABLE 256 APPROVED DRUGS FOR ALL	365
TABLE 257 GLOBAL ACUTE MYELOID LEUKEMIA MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	366
TABLE 258 KEY COMPANIES IN THE AML MARKET	368
TABLE 259 CHRONIC LYMPHOCYTIC LEUKEMIA (CLL) MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	370
TABLE 260 ARZERRA: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	371
TABLE 261 TREANDA SALES, THROUGH 2017 (\$ MILLIONS)	372



<b>TABLE HEADING</b>	<b>PAGE NO.</b>
TABLE 262 KEY PLAYERS IN THE CLL MARKET	376
TABLE 263 TREATMENT GENERIC DRUGS USED IN COMBINATION FOR HODGKIN LYMPHOMA	377
TABLE 264 TREATMENT DRUGS USED IN COMBINATION FOR NON-HODGKIN LYMPHOMA	377
TABLE 265 NON-HODGKIN'S LYMPHOMA DRUG MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	378
TABLE 266 RITUXIMAB SALES AND FORECAST, 2010-2012 (\$ MILLIONS)	379
TABLE 267 RITUXAN: BIOSIMILARS IN DEVELOPMENT	380
TABLE 268 REVLIMID SALES AND FORECAST, 2011 AND 2012 (\$ MILLIONS)	381
TABLE 269 HODGKIN'S LYMPHOMA TREATMENT MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	383
TABLE 270 MULTIPLE MYELOMA TREATMENT MARKET: SALES AND FORECAST, THROUGH 2017 (\$ MILLIONS)	385
TABLE 271 DRUGS FOR THE MYELOMA MARKET	386
TABLE 272 DRUGS IN DEVELOPMENT	389
TABLE 273 TREANDA CLINICAL TRIALS IN RELAPSED AND/OR REFRACTORY MYELOMA	390
TABLE 274 MARKET FOR MYELOYDYSPLASTIC SYNDROME, THROUGH 2017 (\$ MILLIONS)	391
TABLE 275 APPROVED DRUGS FOR THE TREATMENT OF MDS	392
TABLE 276 MARKET FOR MYELOPROLIFERATIVE DISORDERS, THROUGH 2017 (\$ MILLIONS)	393
TABLE 277 JAK2 INHIBITORS IN DEVELOPMENT	394
TABLE 278 RUXOLITINIB FORECAST, 2012 AND 2017 (\$ MILLIONS)	395
TABLE 279 MARKET FOR MYELOFIBROSIS, THROUGH 2017 (\$ MILLIONS)	398
TABLE 280 MARKET FOR POLYCYTHEMIA VERA, THROUGH 2017 (\$ MILLIONS)	399
TABLE 281 MAJOR DRUGS: PATENT EXPIRY	402
TABLE 282 KEY DRUGS: PATENT EXPIRY	403
TABLE 283 DRUGS LOSING PATENT PROTECTION BY 2015 AND THEIR GLOBAL SALES IN 2010 (\$ MILLIONS)	403
TABLE 284 BIOLOGICS: PATENT EXPIRY	404
TABLE 285 NEW DRUG APPROVALS FOR BLOOD DISORDERS, 2012	406
TABLE 286 NEW DRUG APPROVALS FOR HEMATOLOGICAL CANCERS, 2012	408

## LIST OF FIGURES

FIGURE TITLE	PAGE NO.
SUMMARY FIGURE HEMATOLOGICAL DISORDERS DRUGS AND DIAGNOSTICS: GLOBAL MARKETS, 2010-2017 (\$ MILLIONS)	6
FIGURE 1 ESTIMATED INCIDENCE RATES FOR BLOOD CANCERS IN THE U.S., 2010 AND 2011 (PER 100,000 POPULATION)	191
FIGURE 2 ESTIMATED NEW CASES OF LEUKEMIA, LYMPHOMA AND MYELOMA IN THE U.S., 2011	192
FIGURE 3 ESTIMATED LEUKEMIA AND LYMPHOMA INCIDENCE IN THE U.S., 2012	193
FIGURE 4 ESTIMATED NEW CASES OF LEUKEMIA IN THE U.S., 2010-2012 (NO. OF CASES)	198
FIGURE 5 APPROXIMATE PREVALENCE OF DIFFERENT TYPES OF LEUKEMIA IN THE UNITED STATES, 2008 (NO. OF CASES)	199
FIGURE 6 LEUKEMIA IN ADULTS AND CHILDREN IN THE U.S., 2011 (NO. OF CASES)	200
FIGURE 7 ESTIMATED LEUKEMIA INCIDENCE IN THE U.S., 2012 (NO. OF CASES)	202
FIGURE 8 ESTIMATED DEATHS FOR LEUKEMIA IN THE U.S., 2011	204
FIGURE 9 ESTIMATED NON-HODGKIN LYMPHOMA STATISTICS: WORLDWIDE, 2008 (INCIDENCE RATES PER 100,000 POPULATION)	211
FIGURE 10 ESTIMATED NON-HODGKIN LYMPHOMA STATISTICS: WORLDWIDE, 2008 (MORTALITY RATES PER 100,000 POPULATION)	212
FIGURE 11 HODGKIN LYMPHOMA WORLDWIDE, 2008 (ESTIMATED INCIDENCE RATES PER 100,000 POPULATION)	214
FIGURE 12 ESTIMATED NON-HODGKIN LYMPHOMA STATISTICS: EU-27 COUNTRIES, 2008 (AGE-STANDARDIZED INCIDENCE RATES PER 100,000)	216
FIGURE 13 ESTIMATED NON-HODGKIN LYMPHOMA STATISTICS: EU-27 COUNTRIES, 2008 (AGE-STANDARDIZED MORTALITY RATES PER 100,000)	217
FIGURE 14 HODGKIN LYMPHOMA IN EU-27 COUNTRIES, 2008 (ESTIMATED INCIDENCE RATES PER 100,000)	219
FIGURE 15 ESTIMATED NEW CASES AND DEATHS FOR LYMPHOMA IN THE U.S., 2012 (NO. OF CASES)	221
FIGURE 16 ESTIMATED NEW CASES AND DEATHS OF LYMPHOMA IN THE U.S., 2011 AND 2012 (NO. OF CASES)	222
FIGURE 17 ESTIMATED NEW CASES OF LYMPHOMA TYPES IN THE U.S., 2011 AND 2012 (NO. OF CASES)	223
FIGURE 18 NEW CASES OF LYMPHOMA BY GENDER, 2011 (NO. OF CASES)	224
FIGURE 19 ESTIMATED DEATHS FROM LYMPHOMA BY GENDER, 2011 (NO. OF CASES)	224
FIGURE 20 HODGKIN'S LYMPHOMA IN THE U.K., 2008 (ESTIMATED NUMBER OF DEATHS PER 100,000 POPULATION)	232
FIGURE 21 MYELOMA INCIDENCE WORLDWIDE, 2008 (ESTIMATED INCIDENCE RATES PER 100,000 POPULATION)	234
FIGURE 22 MYELOMA MORTALITY RATES WORLD WIDE, 2008 (ESTIMATED INCIDENCE RATES; PER 100,000 POPULATION)	236
FIGURE 23 MYELOMA INCIDENCE RATES, EU-27 COUNTRIES, 2008 (ESTIMATED INCIDENCE RATES; PER 100,000 POPULATION)	237
FIGURE 24 MYELOMA MORTALITY RATES, WORLDWIDE, 2008 (ESTIMATED MORTALITY RATES; PER 100,000 POPULATION)	239
FIGURE 25 ESTIMATED INCIDENCE AND DEATHS FOR MYELOMA IN THE U.S., 2011 AND 2012 (NO. OF CASES)	240

<b>FIGURE TITLE</b>	<b>PAGE NO.</b>
FIGURE 26 ESTIMATED INCIDENCE OF MYELOMA IN THE U.S. BY GENDER, 2011 AND 2012 (NO. OF CASES)	241
FIGURE 27 GLOBAL HEMATOLOGY INSTRUMENTS AND REAGENTS MARKET, 2010-2017 (\$ MILLIONS)	257
FIGURE 28 FLOW CYTOMETRY PRODUCTS: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	263
FIGURE 29 IVD PRODUCTS MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	272
FIGURE 30 UNITED STATES: IVD MARKET SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	273
FIGURE 31 GLOBAL MARKET FOR IMMUNOASSAY SYSTEMS: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	274
FIGURE 32 GLOBAL MARKET FOR ENZYME IMMUNOASSAY SYSTEMS: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	275
FIGURE 33 MOLECULAR DIAGNOSTICS MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	277
FIGURE 34 THE POINT-OF-CARE (POC) TESTING MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	278
FIGURE 35 GLOBAL MARKET FOR POC TESTS: SALES AND FORECAST, 2012 AND 2017 (\$ MILLIONS)	280
FIGURE 36 THE POINT-OF-CARE IMMUNOASSAY MARKET: SALES AND FORECAST, 2012 AND 2017 (\$ MILLIONS)	281
FIGURE 37 GLOBAL BLOOD DISORDER MARKET, 2010-2017 (\$ MILLIONS)	285
FIGURE 38 ANEMIA TREATMENT MARKET, 2010-2017 (\$ MILLIONS)	289
FIGURE 39 KEY ANEMIA DRUGS SALES, 2010-2012 (\$ MILLIONS)	290
FIGURE 40 NEORECORMON/EPOGIN SALES AND FORECAST, 2010-2012 (\$ MILLIONS)	293
FIGURE 41 GLOBAL THROMBOSIS THERAPEUTIC MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	300
FIGURE 42 GLOBAL ANTICOAGULANT DRUG MARKET SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	304
FIGURE 43 GLOBAL ANTIPLATELET DRUG MARKET, 2010-2017 (\$ MILLIONS)	305
FIGURE 44 GLOBAL SEMULOPARIN SALES AND FORECAST, 2011-2017 (\$ MILLIONS)	312
FIGURE 45 GLOBAL NEUTROPENIA DRUG MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	327
FIGURE 46 HEMOPHILIA A THERAPEUTICS MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	331
FIGURE 47 GLOBAL MARKET FOR RECOMBINANT COAGULATION FACTORS FOR HEMOPHILIA, 2010 (\$ MILLIONS)	333
FIGURE 48 GLOBAL CYTOTHERAPEUTICS MARKET, 2010 AND 2017 (\$ MILLIONS)	342
FIGURE 49 U.S. CYTOTHERAPEUTICS MARKET, 2010-2017 (\$ MILLIONS)	343
FIGURE 50 EUROPEAN CYTOTHERAPEUTICS MARKET, 2010-2017 (\$ MILLIONS)	343
FIGURE 51 JAPANESE CYTOTHERAPEUTICS MARKET, 2010-2017 (\$ MILLIONS)	345
FIGURE 52 GLOBAL LEUKEMIA MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	347
FIGURE 53 U.S. LEUKEMIA MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	348
FIGURE 54 EUROPEAN LEUKEMIA MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	349

<b>FIGURE TITLE</b>	<b>PAGE NO.</b>
FIGURE 55 JAPAN'S LEUKEMIA MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	350
FIGURE 56 GLOBAL LEUKEMIA MARKET BY GEOGRAPHICAL REGIONS: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	351
FIGURE 57 CHRONIC MYELOGENOUS LEUKEMIA (CML) MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	352
FIGURE 58 KEY CHRONIC MYELOGENOUS LEUKEMIA (CML) SALES AND FORECAST, 2010-2012 (\$ MILLIONS)	355
FIGURE 59 ACUTE LYMPHOCYTIC LEUKEMIA THERAPEUTICS MARKET, 2010-2017 (\$ MILLIONS)	362
FIGURE 60 GLOBAL ACUTE MYELOID LEUKEMIA MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	366
FIGURE 61 CHRONIC LYMPHOCYTIC LEUKEMIA (CLL) MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	370
FIGURE 62 NON-HODGKIN'S LYMPHOMA DRUG MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	378
FIGURE 63 HODGKIN'S LYMPHOMA TREATMENT MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	383
FIGURE 64 MULTIPLE MYELOMA TREATMENT MARKET: SALES AND FORECAST, 2010-2017 (\$ MILLIONS)	385
FIGURE 65 MARKET FOR MYELOYDYSPLASTIC SYNDROME, 2010-2017 (\$ MILLIONS)	391
FIGURE 66 MARKET FOR MYELOPROLIFERATIVE DISORDERS, 2010-2017 (\$ MILLIONS)	393
FIGURE 67 MARKET FOR MYELOFIBROSIS, 2010-2017 (\$ MILLIONS)	398
FIGURE 68 MARKET FOR POLYCYTHEMIA VERA, 2010-2017 (\$ MILLIONS)	400