#### **REVLIMID**<sup>®</sup> (lenalidomide) 1 5 mg, 10 mg, 15 mg and 25 mg capsules 2 3 **WARNINGS:** 1. POTENTIAL FOR HUMAN BIRTH DEFECTS 4 2. HEMATOLOGIC TOXICITY (NEUTROPENIA AND 5 THROMBOCYTOPENIA) 6 3. DEEP VENOUS THROMBOSIS AND PULMONARY EMBOLISM 7 8 9 POTENTIAL FOR HUMAN BIRTH DEFECTS 10 WARNING: POTENTIAL FOR HUMAN BIRTH DEFECTS 11 LENALIDOMIDE IS AN ANALOGUE OF THALIDOMIDE. THALIDOMIDE IS 12 A KNOWN HUMAN TERATOGEN THAT CAUSES SEVERE LIFE-13 THREATENING HUMAN BIRTH DEFECTS. IF LENALIDOMIDE IS TAKEN DURING PREGNANCY, IT MAY CAUSE BIRTH DEFECTS OR DEATH TO AN 14 UNBORN BABY. FEMALES SHOULD BE ADVISED TO AVOID PREGNANCY 15 WHILE TAKING REVLIMID® (lenalidomide). 16 17 **Special Prescribing Requirements** BECAUSE OF THIS POTENTIAL TOXICITY AND TO AVOID FETAL 18 EXPOSURE TO REVLIMID® (lenalidomide), REVLIMID® (lenalidomide) IS 19 ONLY AVAILABLE UNDER A SPECIAL RESTRICTED DISTRIBUTION 20 PROGRAM, THIS PROGRAM IS CALLED "REVASSIST<sup>SM</sup>". UNDER THIS 21 22 PROGRAM, ONLY PRESCRIBERS AND PHARMACISTS REGISTERED WITH 23 THE PROGRAM CAN PRESCRIBE AND DISPENSE THE PRODUCT. IN ADDITION, REVLIMID MUST ONLY BE DISPENSED TO PATIENTS WHO 24 25 ARE REGISTERED AND MEET ALL THE CONDITIONS OF THE REVASSIST<sup>SM</sup> PROGRAM. 26 PLEASE SEE THE FOLLOWING INFORMATION FOR PRESCRIBERS. 27 28 FEMALE PATIENTS, AND MALE PATIENTS ABOUT THIS RESTRICTED

REVLIMID<sup>®</sup> (lenalidomide) can be prescribed only by licensed prescribers who are registered in the RevAssist<sup>SM</sup> program and understand the potential risk of teratogenicity if lenalidomide is used during pregnancy.

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**Prescribers** 

DISTRIBUTION PROGRAM.

REVASSIST<sup>SM</sup> PROGRAM DESCRIPTION

- 35 Effective contraception must be used by female patients of childbearing potential for at
- least 4 weeks before beginning REVLIMID® (lenalidomide) therapy, during
- 37 REVLIMID<sup>®</sup> (lenalidomide) therapy, during dose interruptions and for 4 weeks
- following discontinuation of REVLIMID® (lenalidomide) therapy. Reliable contraception
- is indicated even where there has been a history of infertility, unless due to hysterectomy
- 40 or because the patient has been postmenopausal naturally for at least 24 consecutive
- 41 months. Two reliable forms of contraception must be used simultaneously unless
- 42 | continuous abstinence from heterosexual sexual contact is the chosen method. Females of
- 43 childbearing potential should be referred to a qualified provider of contraceptive
- 44 methods, if needed. Sexually mature females who have not undergone a hysterectomy,
- 45 have not had a bilateral oophorectomy or who have not been postmenopausal naturally
- 46 | for at least 24 consecutive months (i.e., who have had menses at some time in the
- 47 | preceding 24 consecutive months) are considered to be females of childbearing potential.
- 48 **Before prescribing REVLIMID**® (lenalidomide), females of childbearing potential
- 49 | should have 2 negative pregnancy tests (sensitivity of at least 50 mIU/mL). The first test
- should be performed within 10 14 days, and the second test within 24 hours prior to
- 51 | prescribing REVLIMID® (lenalidomide). A prescription for REVLIMID® (lenalidomide)
- for a female of childbearing potential must not be issued by the prescriber until negative
- 53 pregnancy tests have been verified by the prescriber.
- 54 *Male Patients*: It is not known whether lenalidomide is present in the semen of patients
- receiving the drug. Therefore, males receiving REVLIMID® (lenalidomide) must always
- use a latex condom during any sexual contact with females of childbearing potential even
- 57 | if they have undergone a successful vasectomy.
- Once treatment has started and during dose interruptions, pregnancy testing for
- females of childbearing potential should occur weekly during the first 4 weeks of use,
- then pregnancy testing should be repeated every 4 weeks in females with regular
- 61 menstrual cycles. If menstrual cycles are irregular, the pregnancy testing should occur
- 62 every 2 weeks. Pregnancy testing and counseling should be performed if a patient misses
- her period or if there is any abnormality in her pregnancy test or in her menstrual
- 64 | bleeding. REVLIMID<sup>®</sup> (lenalidomide) treatment must be discontinued during this
- 65 evaluation.
- Pregnancy test results should be verified by the prescriber and the pharmacist prior to
- dispensing any prescription.
- 68 If pregnancy does occur during REVLIMID® (lenalidomide) treatment, REVLIMID®
- 69 (lenalidomide) must be discontinued immediately.
- Any suspected fetal exposure to REVLIMID® (lenalidomide) should be reported to the
- 71 FDA via the MedWatch number at 1-800-FDA-1088 and also to Celgene Corporation at
- 72 | 1-888-423-5436. The patient should be referred to an obstetrician/gynecologist
- experienced in reproductive toxicity for further evaluation and counseling.

## 74 Female Patients

REVLIMID<sup>®</sup> (lenalidomide) should be used in females of childbearing potential only when the patient MEETS ALL OF THE FOLLOWING CONDITIONS (i.e., she is unable to become pregnant while on lenalidomide therapy):

- she understands and can reliably carry out instructions.
- she is capable of complying with the mandatory contraceptive measures, pregnancy testing, patient registration, and patient survey as described in the RevAssist<sup>SM</sup> program.
- she has received and understands both oral and written warnings of the potential risks of taking lenalidomide during pregnancy and of exposing a fetus to the drug.
  - she has received both oral and written warnings of the risk of possible contraception failure and of the need to use two reliable forms of contraception simultaneously, unless continuous abstinence from heterosexual sexual contact is the chosen method. Sexually mature females who have not undergone a hysterectomy or who have not been postmenopausal for at least 24 consecutive months (i.e., who have had menses at some time in the preceding 24 consecutive months), or had a bilateral oophorectomy are considered to be females of childbearing potential.
  - she acknowledges, in writing, her understanding of these warnings and of the need for using two reliable methods of contraception for 4 weeks prior to beginning lenalidomide therapy, during lenalidomide therapy, during dose interruptions and for 4 weeks after discontinuation of lenalidomide therapy.
- she has had two negative pregnancy tests with a sensitivity of at least 50 mIU/mL,
   within 10-14 days and 24 hours prior to beginning therapy.
  - if the patient is between 12 and 18 years of age, her parent or legal guardian must have read the educational materials and agreed to ensure compliance with the above.

#### Male Patients

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- REVLIMID<sup>®</sup> (lenalidomide) should be used in sexually active males when the PATIENT MEETS ALL OF THE FOLLOWING CONDITIONS:
- he understands and can reliably carry out instructions.
- he is capable of complying with the mandatory contraceptive measures that are appropriate for men, patient registration, and patient survey as described in the RevAssist<sup>SM</sup> program.
- he has received and understands both oral and written warnings of the potential risks
   of taking lenalidomide and exposing a fetus to the drug.

- he has received both oral and written warnings of the risk of possible contraception failure and that it is unknown whether lenalidomide is present in semen. He has been instructed that he must always use a latex condom during any sexual contact with females of childbearing potential, even if he has undergone a successful vasectomy.
  - he acknowledges, in writing, his understanding of these warnings and of the need to use a latex condom during any sexual contact with females of childbearing potential, even if he has undergone a successful vasectomy. Females of childbearing potential are considered to be sexually mature females who have not undergone a hysterectomy, have not had a bilateral oophorectomy or who have not been postmenopausal for at least 24 consecutive months (i.e., who have had menses at any time in the preceding 24 consecutive months).
  - if the patient is between 12 and 18 years of age, his parent or legal guardian must have read the educational material and agreed to ensure compliance with the above.

# HEMATOLOGIC TOXICITY (NEUTROPENIA AND THROMBOCYTOPENIA)

This drug is associated with significant neutropenia and thrombocytopenia. Eighty percent of patients with del 5q myelodysplastic syndromes had to have a dose delay/reduction during the major study. Thirty-four percent of patients had to have a second dose delay/reduction. Grade 3 or 4 hematologic toxicity was seen in 80% of patients enrolled in the study. Patients on therapy for del 5q myelodysplastic syndromes should have their complete blood counts monitored weekly for the first 8 weeks of therapy and at least monthly thereafter. Patients may require dose interruption and/or reduction. Patients may require use of blood product support and/or growth factors. (SEE DOSAGE AND ADMINISTRATION)

#### DEEP VENOUS THROMBOSIS AND PULMONARY EMBOLISM

This drug has demonstrated a significantly increased risk of deep venous thrombosis (DVT) and pulmonary embolism (PE) in patients with multiple myeloma who were treated with REVLIMID® (lenalidomide) combination therapy. Patients and physicians are advised to be observant for the signs and symptoms of thromboembolism. Patients should be instructed to seek medical care if they develop symptoms such as shortness of breath, chest pain, or arm or leg swelling. It is not known whether prophylactic anticoagulation or antiplatelet therapy prescribed in conjunction with REVLIMID® (lenalidomide) may lessen the potential for venous thromboembolic events. The decision to take prophylactic measures should be done carefully after an assessment of an individual patient's underlying risk factors.

144 145 146	You can get the information about REVLIMID <sup>®</sup> and the RevAssist <sup>SM</sup> program on the internet at <a href="https://www.REVLIMID.com">www.REVLIMID.com</a> or by calling the manufacturer's toll free number 1-888-423-5436.
147	DESCRIPTION
148 149 150 151	REVLIMID <sup>®</sup> (lenalidomide), a thalidomide analogue, is an immunomodulatory agent with anti-angiogenic and anti-neoplastic properties. The chemical name is 3-(4-amino-1-oxo 1,3-dihydro-2 <i>H</i> -isoindol-2-yl) piperidine-2,6-dione and it has the following chemical structure:
152	Chemical Structure of Lenalidomide
153	$NH_2$
154	3-(4-amino-1-oxo 1,3-dihydro-2 <i>H</i> -isoindol-2-yl) piperidine-2,6-dione
155 156	The empirical formula for lenalidomide is $C_{13}H_{13}N_3O_{3}$ , and the gram molecular weight is 259.3.
157 158 159 160 161 162	Lenalidomide is an off-white to pale-yellow solid powder. It is soluble in organic solvent/water mixtures, and buffered aqueous solvents. Lenalidomide is more soluble in organic solvents and low pH solutions. Solubility was significantly lower in less acidic buffers, ranging from about 0.4 to 0.5 mg/ml. Lenalidomide has an asymmetric carbon atom and can exist as the optically active forms S(-) and R(+), and is produced as a racemic mixture with a net optical rotation of zero.
163 164 165 166 167 168 169	REVLIMID <sup>®</sup> (lenalidomide) is available in 5 mg, 10 mg, 15 mg and 25 mg capsules for oral administration. Each capsule contains lenalidomide as the active ingredient and the following inactive ingredients: lactose anhydrous, microcrystalline cellulose, croscarmellose sodium, and magnesium stearate. The 5 mg and 25 mg capsule shell contains gelatin, titanium dioxide and black ink. The 10 mg capsule shell contains gelatin, FD&C blue #2, yellow iron oxide, titanium dioxide and black ink. The 15 mg capsule shell contains gelatin, FD&C blue #2, titanium dioxide and black ink.
170	CLINICAL PHARMACOLOGY
171	Mechanism of Action:
172 173 174 175 176 177	The mechanism of action of lenalidomide remains to be fully characterized. Lenalidomide possesses anti-neoplastic, immunomodulatory and antiangiogenic properties. Lenalidomide inhibited the secretion of pro-inflammatory cytokines and increased the secretion of anti-inflammatory cytokines from peripheral blood mononuclear cells. Lenalidomide inhibited cell proliferation with varying effectiveness (IC50s) in some but not all cell lines. Of cell lines tested, lenalidomide was effective in

- inhibiting growth of Namalwa cells (a human B cell lymphoma cell line with a deletion
- of one chromosome 5) but was much less effective in inhibiting growth of KG-1 cells
- 180 (human myeloblastic cell line, also with a deletion of one chromosome 5) and other cell
- lines without chromosome 5 deletions. Lenalidomide inhibited the growth of multiple
- myeloma cells from patients, as well as MM.1S cells (a human multiple myeloma cell
- line), by inducing cell cycle arrest and apoptosis.
- Lenalidomide inhibited the expression of cyclooxygenase-2 (COX-2) but not COX-1 in
- 185 vitro.

# Pharmacokinetics and Drug Metabolism:

# 187 **Absorption:**

- Lenalidomide, in healthy volunteers, is rapidly absorbed following oral administration
- with maximum plasma concentrations occurring between 0.625 and 1.5 hours post-dose.
- 190 Co-administration with food does not alter the extent of absorption (AUC) but does
- reduce the maximal plasma concentration (Cmax) by 36%. The pharmacokinetic
- disposition of lenalidomide is linear. Cmax and AUC increase proportionately with
- increases in dose. Multiple dosing at the recommended dose-regimen does not result in
- 194 drug accumulation.
- 195 Pharmacokinetic sampling in myelodysplastic syndromes (MDS) patients was not
- 196 performed. In multiple myeloma patients maximum plasma concentrations occurred
- between 0.5 and 4.0 hours post-dose both on Days 1 and 28. AUC and Cmax values
- increase proportionally with dose following single and multiple doses. Exposure (AUC)
- in multiple myeloma patients is 57% higher than in healthy male volunteers.

#### 200 Pharmacokinetic Parameters:

## 201 **Distribution:**

202 In vitro (<sup>14</sup>C)-lenalidomide binding to plasma proteins is approximately 30%.

# 203 Metabolism and Excretion:

- The metabolic profile of lenalidomide in humans has not been studied. In healthy
- volunteers, approximately two-thirds of lenalidomide is eliminated unchanged through
- 206 urinary excretion. The process exceeds the glomerular filtration rate and therefore is
- 207 partially or entirely active. Half-life of elimination is approximately 3 hours.

## 208 **Special Populations:**

- 209 Patients with Renal Insufficiency: The pharmacokinetics of lenalidomide in MDS patients
- with renal dysfunction has not been determined. In multiple myeloma patients, those with
- 211 mild renal impairment had an AUC 56% greater than those with normal renal function.
- 212 (See PRECAUTIONS: Renal Impairment).

- 213 Patients with Hepatic Disease: The pharmacokinetics of lenalidomide in patients with
- 214 hepatic impairment have not been studied.
- 215 Age: The effects of age on the pharmacokinetics of lenalidomide have not been studied.
- 216 *Pediatric:* No pharmacokinetic data are available in patients below the age of 18 years.
- 217 Gender: The effects of gender on the pharmacokinetics of lenalidomide have not been
- 218 studied.

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219 *Race*: Pharmacokinetic differences due to race have not been studied.

## **CLINICAL STUDIES**

#### Myelodysplastic Syndromes (MDS) with a Deletion 5q Cytogenetic Abnormality

- The efficacy and safety of REVLIMID® (lenalidomide) were evaluated in patients with
- transfusion dependent anemia in Low- or Intermediate-1- risk MDS with a 5q (q31-33)
- 224 cytogenetic abnormality in isolation or with additional cytogenetic abnormalities, at a
- dose of 10 mg once daily or 10 mg once daily for 21 days every 28 days in an open-label,
- single arm, multi-center study. The major study was not designed nor powered to
- prospectively compare the efficacy of the 2 dosing regimens. Sequential dose reductions
- 228 to 5 mg daily and 5 mg every other day, as well as dose delays, were allowed for toxicity.
- This major study enrolled 148 patients who had RBC transfusion dependent anemia.
- 230 RBC-transfusion dependence was defined as having received ≥ 2 units of RBCs within 8
- weeks prior to study treatment. The study enrolled patients with absolute neutrophil
- counts (ANC)  $\geq$  500 cells/mm<sup>3</sup>, platelet counts  $\geq$  50,000/mm<sup>3</sup>, serum creatinine  $\leq$  2.5
- 233 mg/dL, serum SGOT/AST or SGPT/ALT  $\leq$  3.0 x upper limit of normal (ULN), and
- serum direct bilirubin ≤ 2.0 mg/dL. Granulocyte colony-stimulating factor was permitted
- 235 for patients who developed neutropenia or fever in association with neutropenia. Baseline
- patient and disease-related characteristics are summarized in Table 1.

Table 1: Baseline Demographic and Disease-Rel	ated Characteristics
	Overall
	(N=148)
Age (years)	
Median	71.0
Min, Max	37.0, 95.0
Gender	n (%)
Male	51 (34.5)
Female	97 (65.5)
Race	n (%)
White	143 (96.6)
Other	5 (3.4)
Duration of MDS (years)	
Median	2.5
Min, Max	0.1, 20.7
Del 5 (q31-33) Cytogenetic Abnormality	n (%)
Yes	148 (100.0)
Other cytogenetic abnormalities	37 ( 25.2)
IPSS Score [a]	n (%)
Low (0)	55 (37.2)
Intermediate-1 (0.5-1.0)	65 (43.9)
Intermediate-2 (1.5-2.0)	6 ( 4.1)
High (>=2.5)	2 (1.4)
Missing	20 (13.5)

FAB Classification [b] from central review	n (%)
RA	77 (52.0)
RARS	16 (10.8)
RAEB	30 (20.3)
CMML	3 ( 2.0)

[a] IPSS Risk Category: Low (combined score = 0), Intermediate-1 (combined score = 0.5 to 1.0), Intermediate-2 (combined score = 1.5 to 2.0), High (combined score \ge 2.5); Combined score = (Marrow blast score + Karyotype score + Cytopenia score)
[b] French-American-British (FAB) classification of MDS.

- The frequency of RBC-transfusion independence was modified from the International
- Working Group (IWG) response criteria for MDS. RBC transfusion independence was
- 239 defined as the absence of any RBC transfusion during any consecutive "rolling" 56 days
- 240 (8 weeks) during the treatment period.
- Transfusion independence was seen in 99/148 (67%) patients (95% CI [59, 74]). The
- 242 median duration from the date when RBC transfusion independence was first declared
- 243 (i.e., the last day of the 56-day RBC transfusion-free period) to the date when an
- 244 additional transfusion was received after the 56-day transfusion-free period among the 99
- responders was 44 weeks (range of 0 to >67 weeks).
- Ninety percent of patients who achieved a transfusion benefit did so by completion of
- three months in the study.
- 248 RBC-transfusion independence rates were unaffected by age or gender.
- 249 The dose of REVLIMID® (lenalidomide) was reduced or interrupted at least once due to
- an adverse event in 118 (79.7%) of the 148 patients; the median time to the first dose
- reduction or interruption was 21 days (mean, 35.1 days; range, 2-253 days), and the
- 252 median duration of the first dose interruption was 22 days (mean, 28.5 days; range, 2-265
- 253 days). A second dose reduction or interruption due to adverse events was required in 50
- 254 (33.8%) of the 148 patients. The median interval between the first and second dose
- reduction or interruption was 51 days (mean, 59.7 days; range, 15-205 days) and the
- 256 median duration of the second dose interruption was 21 days (mean, 26 days; range, 2-
- 257 148 days).

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- 258 Granulocyte colony-stimulating factors were permitted for patients who developed
- 259 neutropenia or fever in association with neutropenia.

# Multiple Myeloma

- Two randomized studies (Studies 1 and 2) were conducted to evaluate the efficacy and
- safety of REVLIMID<sup>®</sup> (lenalidomide). These multicenter, multinational, double-blind,
- placebo-controlled studies compared REVLIMID® (lenalidomide) plus oral pulse high-
- dose dexamethasone therapy to dexamethasone therapy alone, in patients with multiple
- 265 myeloma who had received at least one prior treatment.
- In both studies, patients in the REVLIMID® (lenalidomide)/dexamethasone group took
- 267 25 mg of REVLIMID<sup>®</sup> (lenalidomide) orally once daily on Days 1 to 21 and a matching
- placebo capsule once daily on Days 22 to 28 of each 28-day cycle. Patients in the
- placebo/dexamethasone group took 1 placebo capsule on Days 1 to 28 of each 28-day

- 270 cycle. Patients in both treatment groups took 40 mg of dexamethasone orally once daily
- on Days 1 to 4, 9 to 12, and 17 to 20 of each 28-day cycle for the first 4 cycles of therapy.
- 272 The dose of dexamethasone was reduced to 40 mg orally once daily on Days 1 to 4 of
- each 28-day cycle after the first 4 cycles of therapy. In both studies, treatment was to
- 274 continue until disease progression.
- 275 In both studies, dose adjustments were allowed based on clinical and laboratory findings.
- 276 Sequential dose reductions to 15 mg daily, 10 mg daily and 5 mg daily were allowed for
- 277 toxicity. (See DOSAGE AND ADMINISTRATION Section).
- Table 2 summarizes the baseline patient and disease characteristics in the two studies. In
- both studies, baseline demographic and disease-related characteristics were comparable
- between the REVLIMID<sup>®</sup> (lenalidomide)/dexamethasone and placebo/dexamethasone
- 281 groups.

282 Table 2 Baseline Demographic and Disease-related Characteristics - Studies 1 and 2

	Study 1		Study 2		
	REVLIMID/Dex N=170	Placebo/Dex N=171	REVLIMID/Dex N=176	Placebo/Dex N=175	
Patient Characteristics					
Age (years) Median Min, Max	64 36, 86	62 37, 85	63 33, 84	64 40, 82	
Sex Male Female	102 (60%) 68 (40%)	101 (59%) 70 (41%)	104 (59%) 72 (41%)	103 (59%) 72 (41%)	
Race/Ethnicity White Other	134 (79%) 36 (21%)	143 (84%) 28 (16%)	172 (98%) 4 (2%)	175 (100%) 0 (0%)	
ECOG Performance Status 0-1	151 (89%)	163 (95%)	150 (85%)	144 (82%)	
Disease Characteristics					
Baseline Multiple Myeloma Stage (Durie-Salmon)  I II III	2% 31% 67%	2% 31% 67%	6% 28% 65%	5% 33% 63%	
Baseline Creatinine (mg/dL) Median	1.0	1.0	0.9	0.9	
Min, Max  B2-microglobulin (mg/L)  Median  Min, Max	0.4, 2.6 3.7 1.1, 45	3.3 1.3, 15.2	0.3, 2.3 3.4 1.0, 14.4	3.3 1.3, 25.3	
Number of Prior Therapies					
No. of Prior Antimyeloma Therapies $\begin{array}{c} 1 \\ \geq 2 \end{array}$	38% 62%	37% 63%	32% 68%	33% 67%	
Types of Prior Therapies					
Stem Cell Transplantation	60%	60%	56%	54%	
Thalidomide	42%	46%	30%	38%	
Dexamethasone  Bortezomib	80% 11%	70%	66% 5%	69% 4%	
Melphalan	34%	31%	56%	52%	
Doxorubicin	55%	52%	56%	57%	

The primary efficacy endpoint in both studies was time to progression (TTP). TTP was defined as the time from randomization to the first occurrence of progressive disease or death due to progressive disease.

Preplanned interim analyses of both studies showed that the combination of REVLIMID<sup>®</sup> (lenalidomide)/dexamethasone was significantly superior to dexamethasone alone for TTP. The studies were unblinded to allow patients in the placebo/dexamethasone group to receive treatment with the REVLIMID<sup>®</sup> (lenalidomide)/dexamethasone combination.

Table 3 summarizes TTP and response rates based on the best response assessments for Studies 1 and 2.

Table 3: Summary of Efficacy Analysis — Studies 1 and 2

	Study 1 Study 2				
	REVLIMID/Dex N=170	Placebo/Dex N=171	REVLIMID/Dex N=176	Placebo/Dex N=175	
TTP					
Censored n (%)	115 (68)	61 (36)	133 (76)	78 (45)	
Median TTP in weeks [95% CI]	37.1 [28, NE <sup>2</sup> ]	19.9 [16, 22]	NE <sup>2</sup>	20 [19.9, 21.6]	
Hazard Ratio <sup>3</sup> [95% CI]	0.356 [0.257,0.494]		0.392 [0.2	0.392 [0.274,0.562]	
Log-rank Test p-Value 1	< 0.0001		<0.0001		
Response					
Complete Response (CR) n (%)	14 (8)	1 (1)	14 (8)	1 (1)	
Partial Responses (RR/PR) n (%)	76 (44)	27 (16)	76 (43)	33 (19)	
Overall Response n (%)	90 (53)	28 (16)	90 (51)	34 (19)	
p-value	< 0.0001		< 0.0001		
Odds Ratio [95% CI]	5.5 [3	3, 9.1]	4.3 [2.7, 7.0]		

Figures 1 and 2 depict the Kaplan-Meier estimates of TTP in Studies 1 and 2, respectively.

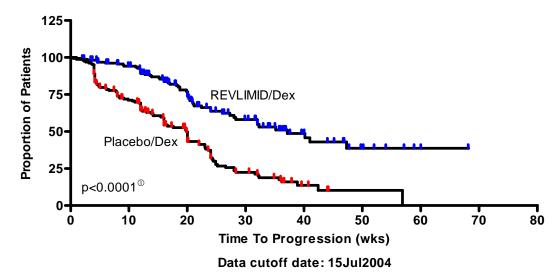
<sup>&</sup>lt;sup>1</sup> The p-value is based on a one-tailed unstratified log rank test.

<sup>&</sup>lt;sup>2</sup> NE, Not Estimable due to short follow-up.

<sup>&</sup>lt;sup>3</sup> Hazard Ratio of Revlimid/Dexamethasone to Placebo/Dexamethasone

Figure 1: Kaplan-Meier Estimate of Time to Progression — Study 1

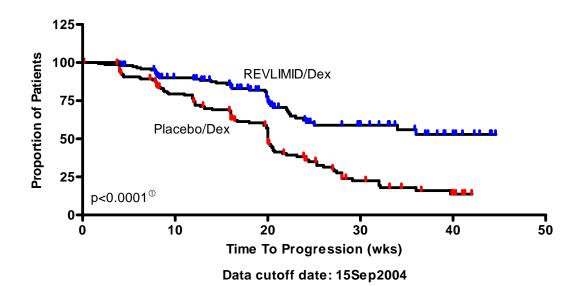
# Time to Progression (TTP), Study 1 REVLIMID/Dex vs Placebo/Dex



<sup>①</sup> p-value from log-rank test

The median duration of Study 1 follow-up was 20.1 weeks.

# Time to Progression (TTP), Study 2 REVLIMID/Dex vs Placebo/Dex



p-value from log-rank test

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The median duration of Study 2 follow-up was 22.3 weeks.

## **INDICATIONS AND USAGE:**

- REVLIMID® (lenalidomide) is indicated for the treatment of patients with transfusion-318
- dependent anemia due to Low- or Intermediate-1-risk myelodysplastic syndromes 319
- 320 associated with a deletion 5q cytogenetic abnormality with or without additional
- 321 cytogenetic abnormalities.
- REVLIMID® (lenalidomide) in combination with dexamethasone is indicated for the 322
- 323 treatment of multiple myeloma patients who have received at least one prior therapy.

#### **CONTRAINDICATIONS:**

## Pregnancy Category X: (See 'BOXED WARNING')

- 326 Due to its structural similarities to thalidomide, a known human teratogen, lenalidomide 327 is contraindicated in pregnant women and women capable of becoming pregnant. (See 328 **BOXED WARNINGS.**) When there is no alternative, females of childbearing potential 329 may be treated with lenalidomide provided adequate precautions are taken to avoid 330 pregnancy. Females must commit either to abstain continuously from heterosexual 331
  - sexual intercourse or to use two methods of reliable birth control, including at least one
- 332 highly effective method (e.g., IUD, hormonal contraception, tubal ligation, or partner's

333	vasectomy) and one additional effective method (e.g., latex condom, diaphragm, or
334	cervical cap), beginning 4 weeks prior to initiating treatment with REVLIMID®

- (lenalidomide), during therapy with REVLIMID® (lenalidomide), during therapy delay,
- and continuing for 4 weeks following discontinuation of REVLIMID<sup>®</sup> (lenalidomide)
- therapy. If hormonal or IUD contraception is medically contraindicated, two other
- effective or highly effective methods may be used.
- Females of childbearing potential being treated with REVLIMID® (lenalidomide) should
- have pregnancy testing (sensitivity of at least 50 mIU/mL). The first test should be
- performed within 10-14 days and the second test within 24 hours prior to beginning
- REVLIMID<sup>®</sup> (lenalidomide) therapy and then weekly during the first month of
- REVLIMID<sup>®</sup> (lenalidomide), then monthly thereafter in women with regular menstrual
- 344 cycles or every 2 weeks in women with irregular menstrual cycles. Pregnancy testing
- and counseling should be performed if a patient misses her period or if there is any
- abnormality in menstrual bleeding. If pregnancy occurs, REVLIMID® (lenalidomide)
- must be immediately discontinued. Under these conditions, the patient should be referred
- 348 to an obstetrician / gynecologist experienced in reproductive toxicity for further
- evaluation and counseling.
- 350 REVLIMID® (lenalidomide) is contraindicated in any patients who have demonstrated
- 351 hypersensitivity to the drug or its components.
- 352 **WARNINGS:**
- 353 Pregnancy Category X: (See 'BOXED WARNING' and CONTRAINDICATIONS)
- 354 REVLIMID® (lenalidomide) is an analogue of thalidomide. Thalidomide is a known
- human teratogen that causes life-threatening human birth defects. REVLIMID®
- 356 (lenalidomide) may cause fetal harm when administered to a pregnant female. Females of
- 357 childbearing potential should be advised to avoid pregnancy while on REVLIMID®
- 358 (lenalidomide). Two effective contraceptive methods should be used during therapy,
- during therapy interruptions and for at least 4 weeks after completing therapy.
- There are no adequate and well-controlled studies in pregnant females.
- Because of this potential toxicity and to avoid fetal exposure to REVLIMID®
- (lenalidomide), REVLIMID<sup>®</sup> (lenalidomide) is only available under a special restricted
- distribution program. This program is called "RevAssist<sup>SM</sup>".
- Lenalidomide has been shown to have an embryocidal effect in rabbits at a dose of 50
- 365 mg/kg (approximately 120 times the human dose of 10 mg based on body surface area).
- An embryo-fetal development study in rats revealed no teratogenic effects at the highest
- dose of 500 mg/kg (approximately 600 times the human dose of 10 mg based on body
- surface area). At 100, 300 or 500 mg/kg/day there was minimal maternal toxicity that
- included slight, transient, reduction in mean body weight gain and food intake. However

370 371	fetal developmental effects of lenalidomide.
372 373 374 375 376	A pre- and post-natal development study in rats revealed few adverse effects on the offspring of female rats treated with lenalidomide at doses up to 500 mg/kg (approximately 600 times the human dose of 10 mg based on body surface area). The male offspring exhibited slightly delayed sexual maturation and the female offspring had slightly lower body weight gains during gestation when bred to male offspring.
377 378 379	Reproductive effects of lenalidomide have not been thoroughly assessed. The structural similarity of lenalidomide to thalidomide, a known human teratogen, suggests a potential risk to the developing fetus.
380	HEMATOLOGIC TOXICITY (NEUTROPENIA AND THROMBOCYTOPENIA):
381	This drug is associated with significant neutropenia and thrombocytopenia.
382 383 384 385 386 387 388 389 390 391 392 393 394	Eighty percent of patients with del 5q MDS had to have a dose delay or reduction during the major study for the indication. Thirty-four percent of patients had to have a second dose delay/reduction. Grade 3 or 4 hematologic toxicity was seen in 80% of patients enrolled in the study. In the 48% of patients who developed Grade 3 or 4 neutropenia, the median time to onset was 42 days (range, 14 – 411 days), and the median time to documented recovery was 17 days (range, 2 – 170 days). In the 54% of patients who developed Grade 3 or 4 thrombocytopenia, the median time to onset was 28 days (range, 8 - 290 days), and the median time to documented recovery was 22 days (range, 5 – 224 days). Patients on therapy for del 5q myelodysplastic syndromes should have their complete blood counts monitored weekly for the first 8 weeks of therapy and at least monthly thereafter. Patients may require dose interruption and/or reduction. Patients may require use of blood product support and/or growth factors. See DOSAGE AND ADMINISTRATION.
395 396 397 398 399 400 401	In the pooled multiple myeloma studies Grade 3 and 4 hematologic toxicities were more frequent in patients treated with the combination of REVLIMID <sup>®</sup> (lenalidomide) and dexamethasone than in patients treated with dexamethasone alone. See ADVERSE REACTIONS Table 7. Patients on therapy should have their complete blood counts monitored every 2 weeks for the first 12 weeks and then monthly thereafter. Patients may require dose interruption and/or dose reduction. See DOSAGE AND ADMINISTRATION
402	DEEP VENOUS THROMBOSIS AND PULMONARY EMBOLISM:
403 404 405 406 407 408	This drug has demonstrated a significantly increased risk of DVT and PE in patients with multiple myeloma who were treated with REVLIMID <sup>®</sup> (lenalidomide) combination therapy. Patients and physicians are advised to be observant for the signs and symptoms of thromboembolism. Patients should be instructed to seek medical care if they develop symptoms such as shortness of breath, chest pain, or arm or leg swelling. It is not known whether prophylactic anticoagulation or

antiplatelet therapy prescribed in conjunction with REVLIMID® (lenalidomide) 409 410 may lessen the potential for venous thromboembolic events. The decision to take 411 prophylactic measures should be done carefully after an assessment of an individual 412 patient's underlying risk factors. See ADVERSE REACTIONS Table 7. 413 414 **PRECAUTIONS:** 415 General: 416 No formal studies have been conducted in patients with renal impairment. This drug is 417 known to be excreted by the kidney, and the risk of adverse reactions to this drug may be 418 greater in patients with impaired renal function. 419 **Information for Patients:** 420 Patients should be counseled on lenalidomide's potential risk of teratogenicity due to its 421 structural similarity to thalidomide. Patients may only acquire a prescription for REVLIMID® (lenalidomide) therapy through a controlled distribution program 422 (RevAssist<sup>SM</sup>) through contracted pharmacies. Female patients of childbearing potential 423 will be educated and counseled on the requirements of the RevAssist<sup>SM</sup> program and the 424 precautions to be taken to preclude fetal exposure to REVLIMID<sup>®</sup> (lenalidomide). 425 Patients should become familiar with the REVLIMID® RevAssist<sup>SM</sup> educational 426 materials, Patient Medication Guide, and direct any questions to their physician or 427 428 pharmacist prior to starting REVLIMID® (lenalidomide) therapy. 429 **Laboratory tests:** 430 The MDS clinical study enrolled patients with absolute neutrophil counts (ANC) > 500 cells/mm<sup>3</sup>, platelet counts  $\geq 50,000/\text{mm}^3$ , serum creatinine  $\leq 2.5 \text{ mg/dL}$ , serum 431 SGOT/AST or SGPT/ALT  $\leq$  3.0 x upper limit of normal (ULN), and serum direct 432 433 bilirubin ≤ 2.0 mg/dL. A complete blood cell count (CBC), including white blood cell count with differential, platelet count, hemoglobin, and hematocrit should be performed 434 weekly for the first 8 weeks of REVLIMID® (lenalidomide) treatment and monthly 435 436 thereafter to monitor for cytopenias. The multiple myeloma studies 1 and 2 enrolled patients with absolute neutrophil counts 437  $(ANC) \ge 1000 \text{ cells/mm}^3$ , platelet counts  $\ge 75,000/\text{mm}^3$ , serum creatinine  $\le 2.5 \text{ mg/dL}$ , 438 439 serum SGOT/AST or SGPT/ALT \le 3.0 x upper limit of normal (ULN), and serum direct 440 bilirubin ≤ 2.0 mg/dL. A CBC should be performed every two weeks for the first three 441 months and at least monthly thereafter to monitor for cytopenias. 442 **Drug Interactions:** Results from human in vitro metabolism studies and nonclinical studies show that 443 REVLIMID<sup>®</sup> (lenalidomide) is neither metabolized by nor inhibits or induces the 444

445 446	subject to P450-based metabolic drug interactions in man.
447 448 449 450 451	Co-administration of multiple doses of 10 mg of lenalidomide had no effect on the single dose pharmacokinetics of R- and S- warfarin. Co-administration of single 25-mg dose warfarin had no effect on the pharmacokinetics of total lenalidomide. Expected changes in laboratory assessments of PT and INR were observed after warfarin administration, but these changes were not affected by concomitant lenalidomide administration.
452 453 454 455 456	When <b>digoxin</b> was co-administered with lenalidomide the <b>digoxin</b> AUC was not significantly different, however, the <b>digoxin</b> $C_{max}$ was increased by 14%. Periodic monitoring of <b>digoxin</b> plasma levels, in accordance with clinical judgment and based on standard clinical practice in patients receiving this medication, is recommended during administration of lenalidomide.
457	Carcinogenesis, mutagenesis, impairment of fertility:
458	Carcinogenicity: Carcinogenicity studies with lenalidomide have not been conducted.
459 460 461 462 463	Mutagenesis: Lenalidomide did not induce mutation in the Ames test, chromosome aberrations in cultured human peripheral blood lymphocytes, or mutation at the thymidine kinase (tk) locus of mouse lymphoma L5178Y cells. Lenalidomide did not increase morphological transformation in Syrian Hamster Embryo assay or induce micronuclei in the polychromatic erythrocytes of the bone marrow of male rats.
464 465 466 467	Fertility: A fertility and early embryonic development study in rats, with administration of lenalidomide up to 500 mg/kg (approximately 600 times the human dose of 10 mg, based on body surface area) produced no parental toxicity and no adverse effects on fertility.
468	Pregnancy:
469	Pregnancy Category X: (See 'BOXED WARNINGS' and CONTRAINDICATIONS
470 471 472 473 474 475 476	Because of the structural similarity to thalidomide, a known human teratogen, and the lack of sufficient information regarding lenalidomide's teratogenic potential, REVLIMID <sup>®</sup> (lenalidomide) is contraindicated in females who are or may become pregnant and who are not using the two required types of birth control or who are not continually abstaining from reproductive heterosexual sexual intercourse. REVLIMID <sup>®</sup> (lenalidomide) should not be used by females who are pregnant or who could become pregnant while taking the drug. If pregnancy does occur during treatment, the drug
477 478 479 480 481	should be immediately discontinued. Under these conditions, the patient should be referred to an obstetrician / gynecologist experienced in reproductive toxicity for further evaluation and counseling. Any suspected fetal exposure to REVLIMID <sup>®</sup> (lenalidomide) should be reported to the FDA via the MedWatch program at 1-800-FDA-1088 and also to Celgene Corporation at 1-888-423-5436.

#### 482 **Use in Nursing Mothers:** 483 It is not known whether this drug is excreted in human milk. Because many drugs are 484 excreted in human milk and because of the potential for adverse reactions in nursing 485 infants from lenalidomide, a decision should be made whether to discontinue nursing or 486 to discontinue the drug, taking into account the importance of the drug to the mother. 487 **Pediatric Use:** 488 Safety and effectiveness in pediatric patients below the age of 18 have not been 489 established. 490 Geriatric Use: REVLIMID<sup>®</sup> (lenalidomide) has been used in del 5q MDS clinical trials in patients up to 491 492 95 years of age. 493 Of the 148 patients with del 5q MDS enrolled in the major study, 38% were age 65 and 494 over, while 33% were age 75 and over. Although the overall frequency of adverse events 495 (100%) was the same in patients over 65 years of age as in younger patients, the 496 frequency of serious adverse events was higher in patients over 65 years of age than in 497 younger patients (54% vs. 33%). A greater proportion of patients over 65 years of age 498 discontinued from the clinical studies because of adverse events than the proportion of 499 younger patients (27% vs.16%). No differences in efficacy were observed between 500 patients over 65 years of age and younger patients. REVLIMID® (lenalidomide) has been used in multiple myeloma (MM) clinical trials in 501 502 patients up to 86 years of age. 503 504 Of the 692 MM patients enrolled in Studies 1 and 2, 45% were age 65 or over while 12% 505 of patients were age 75 and over. The percentage of patients age 65 or over was not significantly different between the REVLIMID® (lenalidomide)/dexamethasone and 506 507

of patients were age 75 and over. The percentage of patients age 65 or over was not significantly different between the REVLIMID<sup>®</sup> (lenalidomide)/dexamethasone and placebo/dexamethasone groups. Of the 346 patients who received REVLIMID<sup>®</sup> (lenalidomide)/dexamethasone, 46% were age 65 and over. In both studies, patients > 65 years of age were more likely than patients  $\leq$  65 years of age to experience diarrhea, fatigue, pulmonary embolism, and syncope following use of REVLIMID<sup>®</sup> (lenalidomide). No differences in efficacy were observed between patients over 65 years of age and younger patients.

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This drug is known to be substantially excreted by the kidney, and the risk of toxic reactions to this drug may be greater in patients with impaired renal function. Because elderly patients are more likely to have decreased renal function, care should be taken in dose selection, and it would be prudent to monitor renal function.

# **Renal Impairment:**

- This drug is known to be substantially excreted by the kidney, and the risk of toxic
- reactions to this drug is expected to be greater in patients with impaired renal function.
- Patients with renal insufficiency were excluded from the clinical trials, and those who
- developed renal insufficiency during the clinical trials had the drug held. Care should be
- taken in dose selection, and it would be prudent to monitor renal function.

#### **ADVERSE REACTIONS:**

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#### **Myelodysplastic Syndromes**

- A total of 148 patients received at least 1 dose of 10 mg lenalidomide in the del 5q MDS
- clinical study. At least one adverse event was reported in all of the 148 patients who were
- treated with the 10 mg starting dose of REVLIMID® (lenalidomide). The most frequently
- reported adverse events were related to blood and lymphatic system disorders, skin and
- subcutaneous tissue disorders, gastrointestinal disorders, and general disorders and
- administrative site conditions. (See **PRECAUTIONS**)
- Thrombocytopenia (61.5%; 91/148) and neutropenia (58.8%; 87/148) were the most
- frequently reported adverse events observed. The next most common adverse events
- observed were diarrhea (48.6%; 72/148), pruritis (41.9%; 62/148), rash (35.8%; 53/148)
- and fatigue (31.1%; 46/148). Table 4 summarizes the adverse events that were reported
- 536 in  $\geq$  5% of the REVLIMID<sup>®</sup> (lenalidomide) treated patients in the del 5q MDS clinical
- 537 study. Table 5 summarizes the most frequently observed Grade 3 and Grade 4 adverse
- reactions regardless of relationship to treatment with REVLIMID® (lenalidomide). In the
- single-arm studies conducted, it is often not possible to distinguish adverse events that are
- drug-related and those that reflect the patient's underlying disease.

System organ class/ Preferred term [a]	10 mg Overall (N=148)
PATIENTS WITH AT LEAST ONE ADVERSE EVENT	148 (100.0)
BLOOD AND LYMPHATIC SYSTEM DISORDERS	
THROMBOCYTOPENIA	91 ( 61.5)
NEUTROPENIA	87 ( 58.8)
ANEMIA NOS	17 ( 11.5)
LEUKOPENIA NOS	12 ( 8.1)
FEBRILE NEUTROPENIA	8 ( 5.4)
SKIN AND SUBCUTANEOUS TISSUE DISORDERS	
PRURITUS	62 ( 41.9)
RASH NOS	53 ( 35.8)
DRY SKIN	21 ( 14.2)
CONTUSION	12 ( 8.1)
NIGHT SWEATS	12 ( 8.1)
SWEATING INCREASED	10 ( 6.8)
ECCHYMOSIS	8 ( 5.4)
ERYTHEMA	8 ( 5.4)
SASTROINTESTINAL DISORDERS	
DIARRHEA NOS	72 ( 48.6)
CONSTIPATION	35 ( 23.6)
NAUSEA	35 ( 23.6)
ABDOMINAL PAIN NOS	18 ( 12.2)
VOMITING NOS	15 ( 10.1)
ABDOMINAL PAIN UPPER	12 ( 8.1)
DRY MOUTH	10 ( 6.8)
LOOSE STOOLS	9 ( 6.1)
RESPIRATORY, THORACIC AND MEDIASTINAL DIS	ORDERS
NASOPHARYNGITIS	34 ( 23.0)

COUGH	29 ( 19.6)
DYSPNEA NOS	25 ( 16.9)
PHARYNGITIS	23 ( 15.5)
EPISTAXIS	22 ( 14.9)
DYSPNOEA EXERTIONAL	10 ( 6.8)
RHINITIS NOS	10 ( 6.8)
BRONCHITIS NOS	9 ( 6.1)
GENERAL DISORDERS AND ADMINISTRATION SITE COND	ITIONS
FATIGUE	46 ( 31.1)
PYREXIA	31 ( 20.9)
EDEMA PERIPHERAL	30 ( 20.3)
ASTHENIA	22 ( 14.9)
EDEMA NOS	15 ( 10.1)
PAIN NOS	10 ( 6.8)
RIGORS	9 ( 6.1)
CHEST PAIN	8 ( 5.4)
MUSCULOSKELETAL AND CONNECTIVE TISSUE DISORDER	
ARTHRALGIA	32 ( 21.6)
BACK PAIN	31 ( 20.9)
MUSCLE CRAMP	27 ( 18.2)
PAIN IN LIMB	16 ( 10.8)
MYALGIA	13 ( 8.8)
PERIPHERAL SWELLING	12 ( 8.1)
NERVOUS SYSTEM DISORDERS	
DIZZINESS	29 ( 19.6)
HEADACHE	29 ( 19.6)
HYPOASTHESIA	10 ( 6.8)
DYSGEUSIA	9 ( 6.1)
PERIPHERAL NEUROPATHY NOS	8 ( 5.4)
INFECTIONS AND INFESTATIONS	
UPPER RESPIRATORY TRACT INFECTION NOS	22 ( 14.9)
PNEUMONIA NOS	17 ( 11.5)
URINARY TRACT INFECTION NOS	16 ( 10.8)
SINUSITIS NOS	12 ( 8.1)
CELLULITIS	8 ( 5.4)
METABOLISM AND NUTRITION DISORDERS	
HYPOKALAEMIA	16 ( 10.8)
ANOREXIA	15 ( 10.1)
HYPOMAGNESAEMIA	9 ( 6.1)
INVESTIGATIONS	
ALANINE AMINOTRANSFERASE INCREASED	12 ( 8.1)
PSYCHIATRIC DISORDERS	
INSOMNIA	15 ( 10.1)
DEPRESSION	8 ( 5.4)
VASCULAR DISORDERS	
HYPERTENSION NOS	9 ( 6.1)
RENAL AND URINARY DISORDERS	
DYSURIA	10 ( 6.8)
CARDIAC DISORDERS	
PALPITATIONS	8 ( 5.4)
ENDOCRINE DISORDERS	*
ACQUIRED HYPOTHYROIDISM	10 ( 6.8)
NOC not otherwise specified	(/

Table 5 Most Frequently Observed Grade 3 and 4 Adverse Regardless of Relationship to Study Drug Treatment	Event	s [1]
Preferred term [2]		10 mg N=148)
PATIENTS WITH AT LEAST ONE GR 3 / 4 AE	131	(88.5)
NEUTROPENIA	79	(53.4)
THROMBOCYTOPENIA	74	(50.0)
PNEUMONIA NOS	11	(7.4)
RASH NOS	10	(6.8)
ANAEMIA NOS	9	(6.1)
LEUKOPENIA NOS	8	(5.4)
FATIGUE	7	(4.7)

NOS, not otherwise specified

[a] System organ classes and preferred terms are coded using the MedDRA dictionary. System organ classes and preferred terms are listed in descending order of frequency for the Overall column.

A patient with multiple occurrences of an AE is counted only once in the AE category.

BACK PAIN FEBRILE NEUTROPENIA FEBRILE NEUTROPE	DYSPNEA	7 ( 4.7)
NAUSEA DIARRHEA NOS DIARRHEA NOS PYREXIA SEPSIS 4 (2.7) DIZZINESS 4 (2.7) GRANULOCYTOPENIA 3 (2.0) CHEST PAIN PULMONARY EMBOLISM RESPIRATORY DISTRESS PANCYTOPENIA 3 (2.0) RESPIRATORY DISTRESS PANCYTOPENIA 3 (2.0) RESPIRATORY TISTRESS PANCYTOPENIA 3 (2.0) MUSCLE CRAMP 3 (2.0) RESPIRATORY TRACT INFECTION 2 (1.4) UPPER RESPIRATORY TRACT INFECTION 2 (1.4) UPPER RESPIRATORY TRACT INFECTION 2 (1.4) MULTI-ORGAN FAILURE 2 (1.4) EPISTAXIS 2 (1.4) HYPOXIA PLEURAL EFFUSION 2 (1.4) PHEUMONITIS NOS 2 (1.4) PULMONARY HYPERTENSION NOS 2 (1.4) PULMONARY HYPERTENSION NOS 2 (1.4) SWEATING INCREASED 3 (2.1.4) PAIN IN LIMB 4 (2.7) ARTHRALGIA PAIN IN LIMB 4 (2.7) ACTUAL OF THE COURSE C (1.4) SYNCOPE 2 (1.4) SYNCOPE 2 (1.4) SYNCOPE 2 (1.4) Criteria version 2. [2] Preferred Terms are coded using the MedDRA dictionary. A patient	BACK PAIN	7 ( 4.7)
DIARRHEA NOS PYREXIA SEPSIS 4 (2.7) DIZZINESS 4 (2.7) GRANULOCYTOPENIA 3 (2.0) CHEST PAIN PULMONARY EMBOLISM RESPIRATORY DISTRESS 3 (2.0) PRURITUS 3 (2.0) PANCYTOPENIA 3 (2.0) MUSCLE CRAMP RESPIRATORY TRACT INFECTION 2 (1.4) UPPER RESPIRATORY TRACT INFECTION 2 (1.4) UPPER RESPIRATORY TRACT INFECTION 2 (1.4) EPISTAXIS 2 (1.4) MULTI-ORGAN FAILURE 2 (1.4) EPISTAXIS 2 (1.4) PLEURAL EFFUSION PLEURAL EFFUSION PULMONARY HYPERTENSION NOS 2 (1.4) PULMONARY HYPERTENSION NOS 2 (1.4) PULMONARY HYPERTENSION NOS 2 (1.4) SWEATING INCREASED 3 (2.1.4) PAIN IN LIMB 4 (2.7) ARTHRALGIA PAIN IN LIMB 4 (2.7) ARTHRALGIA PAIN IN LIMB 4 (2.1.4) PAIN IN LIMB 5 (2.1.4) PAIN IN LIMB 6 (2.1.4) PAIN IN LIMB 7 (1.4) PAIN IN LIMB 8 (2.1.4) PAIN IN LIMB 9 (2.1.4) PAIN IN LIMB 9 (2.1.4) PAIN IN LIMB 1 (2.1.4) PAIN IN LIMB 1 (2.1.4) PAIN IN LIMB 2 (1.4) PAIN IN LIMB 3 (2.0) PRESPIRATORY PROPER 4 (2.7) PROPER 5 (3.4) PAIN IN LIMB 7 (1.4) PAIN IN LIMB 8 (2.1.4) PAIN IN LIMB 9	FEBRILE NEUTROPENIA	6 ( 4.1)
PYREXIA SEPSIS  4 ( 2.77) DIZZINESS 4 ( 2.77) GRANULOCYTOPENIA 3 ( 2.00) CHEST PAIN 3 ( 2.00) PULMONARY EMBOLISM RESPIRATORY DISTRESS 3 ( 2.00) PRESPIRATORY DISTRESS 3 ( 2.00) PANCYTOPENIA 3 ( 2.00) PANCYTOPENIA 3 ( 2.00) RESPIRATORY TRACT INFECTION UPPER RESPIRATORY TRACT INFECTION 2 ( 1.4) UPPER RESPIRATORY TRACT INFECTION 2 ( 1.4) ASTHENIA MULTI-ORGAN FAILURE 2 ( 1.4) EPISTAXIS 2 ( 1.4) PLEURAL EFFUSION PNEUMONITIS NOS 2 ( 1.4) PLEURAL EFFUSION PNEUMONITIS NOS 2 ( 1.4) PULMONARY HYPERTENSION NOS 2 ( 1.4) PULMONARY HYPERTENSION NOS 2 ( 1.4) SWEATING INCREASED ARTHRALGIA PAIN IN LIMB PAIN IN LIMB PAIN IN LIMB PEDACHE SYNCOPE 2 ( 1.4) SYNCOPE 2 ( 1.4) PATHER 10 mg Overall group. Grade 3 and 4 are based on National Cancer Institute Common Toxicity Criteria version 2.  [2] Preferred Terms are coded using the MedDRA dictionary. A patient	NAUSEA	6 ( 4.1)
SEPSIS       4 (2.7)         DIZZINESS       4 (2.7)         GRANULOCYTOPENIA       3 (2.0)         CHEST PAIN       3 (2.0)         PULMONARY EMBOLISM       3 (2.0)         RESPIRATORY DISTRESS       3 (2.0)         PRANCYTOPENIA       3 (2.0)         MUSCLE CRAMP       3 (2.0)         RESPIRATORY TRACT INFECTION       2 (1.4)         UPPER RESPIRATORY TRACT INFECTION       2 (1.4)         ASTHENIA       2 (1.4)         MULTI-ORGAN FAILURE       2 (1.4)         EPISTAXIS       2 (1.4)         HYPOXIA       2 (1.4)         PEURMAL EFFUSION       2 (1.4)         PULMONARY HYPERTENSION NOS       2 (1.4)         VOMITING NOS       2 (1.4)         SWEATING INCREASED       2 (1.4)         ARTHRALGIA       2 (1.4)         PAIN IN LIMB       2 (1.4)         HEADACHE       2 (1.4)         SYNCOPE       2 (1.4)         [1] Adverse events with frequency >=1% in the 10 mg Overall group. Grade         3 and 4 are based on National Cancer Institute Common Toxicity         Criteria version 2.       [2] Preferred Terms are coded using the MedDRA dictionary. A patient	DIARRHEA NOS	5 ( 3.4)
DIZZINESS GRANULOCYTOPENIA GRESPIRATORY DISTRESS GRANULOCYTOPENIA GRANULOCYTOPENIA GRANULOCYTOPENIA GRESPIRATORY DISTRESS GRANULOCYTOPENIA GRA	PYREXIA	5 ( 3.4)
GRANULOCYTOPENIA CHEST PAIN CHEST PAIN 3 ( 2.0) PULMONARY EMBOLISM 3 ( 2.0) RESPIRATORY DISTRESS 3 ( 2.0) PRURITUS 3 ( 2.0) PANCYTOPENIA 3 ( 2.0) MUSCLE CRAMP 3 ( 2.0) RESPIRATORY TRACT INFECTION 2 ( 1.4) UPPER RESPIRATORY TRACT INFECTION 2 ( 1.4) MULTI-ORGAN FAILURE 2 ( 1.4) EPISTAXIS 4 ( 1.4) HYPOXIA 2 ( 1.4) PLEURAL EFFUSION PNEUMONITIS NOS 2 ( 1.4) PULMONARY HYPERTENSION NOS 2 ( 1.4) PULMONARY HYPERTENSION NOS 2 ( 1.4) VOMITING NOS 2 ( 1.4) SWEATING INCREASED 2 ( 1.4) ARTHRALGIA PAIN IN LIMB 2 ( 1.4) HEADACHE SYNCOPE [1] Adverse events with frequency >=1% in the 10 mg Overall group. Grade 3 and 4 are based on National Cancer Institute Common Toxicity Criteria version 2.	SEPSIS	4 ( 2.7)
CHEST PAIN   3 ( 2.0)   PULMONARY EMBOLISM   3 ( 2.0)   RESPIRATORY DISTRESS   3 ( 2.0)   PRURITUS   3 ( 2.0)   PANCYTOPENIA   3 ( 2.0)   MUSCLE CRAMP   3 ( 2.0)   RESPIRATORY TRACT INFECTION   2 ( 1.4)   Langler	DIZZINESS	4 (2.7)
PULMONARY EMBOLISM RESPIRATORY DISTRESS RESPIRATORY DISTRESS RESPIRATORY DISTRESS RESPIRATORY DISTRESS RANCYTOPENIA RESPIRATORY RESPIRATORY TRACT INFECTION RESPIRATORY RE	GRANULOCYTOPENIA	3 ( 2.0)
RESPIRATORY DISTRESS PRURITUS PANCYTOPENIA 3 (2.0) PANCYTOPENIA 3 (2.0) MUSCLE CRAMP 3 (2.0) RESPIRATORY TRACT INFECTION 2 (1.4) UPPER RESPIRATORY TRACT INFECTION 2 (1.4) ASTHENIA MULTI-ORGAN FAILURE 2 (1.4) EPISTAXIS 4 (1.4) HYPOXIA PLEURAL EFFUSION PNEUMONITIS NOS 2 (1.4) PNEUMONARY HYPERTENSION NOS 2 (1.4) VOMITING NOS 2 (1.4) SWEATING INCREASED 3 RATHRALGIA PAIN IN LIMB HEADACHE SYNCOPE 2 (1.4) [1] Adverse events with frequency >=1% in the 10 mg Overall group. Grade 3 and 4 are based on National Cancer Institute Common Toxicity Criteria version 2.	CHEST PAIN	
PRURITUS PANCYTOPENIA PANCYTOPENIA 3 ( 2.0) MUSCLE CRAMP 3 ( 2.0) RESPIRATORY TRACT INFECTION 2 ( 1.4) UPPER RESPIRATORY TRACT INFECTION 2 ( 1.4) ASTHENIA MULTI-ORGAN FAILURE 2 ( 1.4) EPISTAXIS 4 ( 1.4) HYPOXIA PLEURAL EFFUSION PLEURAL EFFUSION PULMONARY HYPERTENSION NOS 2 ( 1.4) PULMONARY HYPERTENSION NOS 2 ( 1.4) SWEATING INCREASED 3 REATHRALGIA PAIN IN LIMB HEADACHE SYNCOPE 1 Adverse events with frequency >=1% in the 10 mg Overall group. Grade 3 and 4 are based on National Cancer Institute Common Toxicity Criteria version 2.  [2] Preferred Terms are coded using the MedDRA dictionary. A patient	PULMONARY EMBOLISM	
PANCYTOPENIA  MUSCLE CRAMP  RESPIRATORY TRACT INFECTION  UPPER RESPIRATORY TRACT INFECTION  ASTHENIA  MULTI-ORGAN FAILURE  EPISTAXIS  HYPOXIA  PLEURAL EFFUSION  PULMONARY HYPERTENSION NOS  VOMITING NOS  SWEATING INCREASED  ARTHRALGIA  PAIN IN LIMB  HEADACHE  SYNCOPE  [1] Adverse events with frequency >=1% in the 10 mg Overall group. Grade  3 and 4 are based on National Cancer Institute Common Toxicity  Criteria version 2.  [2] Preferred Terms are coded using the MedDRA dictionary. A patient	RESPIRATORY DISTRESS	
MUSCLE CRAMP RESPIRATORY TRACT INFECTION UPPER RESPIRATORY TRACT INFECTION 2 (1.4) ASTHENIA 3 (2.0) ASTHENIA 4 (1.4) MULTI-ORGAN FAILURE 2 (1.4) EPISTAXIS 2 (1.4) HYPOXIA PLEURAL EFFUSION PNEUMONITIS NOS 2 (1.4) PULMONARY HYPERTENSION NOS 2 (1.4) VOMITING NOS 2 (1.4) ARTHRALGIA PAIN IN LIMB HEADACHE SYNCOPE [1] Adverse events with frequency >=1% in the 10 mg Overall group. Grade 3 and 4 are based on National Cancer Institute Common Toxicity Criteria version 2. [2] Preferred Terms are coded using the MedDRA dictionary. A patient	PRURITUS	
RESPIRATORY TRACT INFECTION 2 (1.4)  UPPER RESPIRATORY TRACT INFECTION 2 (1.4)  ASTHENIA 2 (1.4)  MULTI-ORGAN FAILURE 2 (1.4)  EPISTAXIS 2 (1.4)  HYPOXIA 2 (1.4)  PLEURAL EFFUSION 2 (1.4)  PNEUMONITIS NOS 2 (1.4)  PULMONARY HYPERTENSION NOS 2 (1.4)  VOMITING NOS 2 (1.4)  VOMITING NOS 2 (1.4)  ARTHRALGIA 2 (1.4)  PAIN IN LIMB 2 (1.4)  HEADACHE 2 (1.4)  SYNCOPE 2 (1.4)  [1] Adverse events with frequency >=1% in the 10 mg Overall group. Grade 3 and 4 are based on National Cancer Institute Common Toxicity Criteria version 2.	PANCYTOPENIA	3 ( 2.0)
UPPER RESPIRATORY TRACT INFECTION 2 (1.4) ASTHENIA 2 (1.4) MULTI-ORGAN FAILURE 2 (1.4) EPISTAXIS 2 (1.4) HYPOXIA 2 (1.4) PLEURAL EFFUSION 2 (1.4) PNEUMONITIS NOS 2 (1.4) PULMONARY HYPERTENSION NOS 2 (1.4) VOMITING NOS 2 (1.4) SWEATING INCREASED 2 (1.4) ARTHRALGIA 2 (1.4) PAIN IN LIMB 2 (1.4) HEADACHE 2 (1.4) SYNCOPE 2 (1.4) [1] Adverse events with frequency >=1% in the 10 mg Overall group. Grade 3 and 4 are based on National Cancer Institute Common Toxicity Criteria version 2.	MUSCLE CRAMP	3 ( 2.0)
ASTHENIA  MULTI-ORGAN FAILURE  EPISTAXIS  HYPOXIA  PLEURAL EFFUSION  PNEUMONITIS NOS  PULMONARY HYPERTENSION NOS  VOMITING NOS  SWEATING INCREASED  ARTHRALGIA  PAIN IN LIMB  HEADACHE  SYNCOPE  [1] Adverse events with frequency >=1% in the 10 mg Overall group. Grade  3 and 4 are based on National Cancer Institute Common Toxicity  Criteria version 2.  [2] Preferred Terms are coded using the MedDRA dictionary. A patient	RESPIRATORY TRACT INFECTION	2 (1.4)
MULTI-ORGAN FAILURE 2 (1.4) EPISTAXIS 2 (1.4) HYPOXIA 2 (1.4) PLEURAL EFFUSION 2 (1.4) PNEUMONITIS NOS 2 (1.4) PULMONARY HYPERTENSION NOS 2 (1.4) VOMITING NOS 2 (1.4) SWEATING INCREASED 2 (1.4) ARTHRALGIA PAIN IN LIMB 2 (1.4) HEADACHE SYNCOPE 2 (1.4) [1] Adverse events with frequency >=1% in the 10 mg Overall group. Grade 3 and 4 are based on National Cancer Institute Common Toxicity Criteria version 2.	UPPER RESPIRATORY TRACT INFECTION	
EPISTAXIS HYPOXIA HYPOXIA PLEURAL EFFUSION PNEUMONITIS NOS PULMONARY HYPERTENSION NOS PULMONARY HYPERTENSION NOS PULMONITING NOS PULMONARY INCREASED PAIN IN LIMB PAIN IN LIMB PAIN IN LIMB PAIN IN LIMB PAUCHE SYNCOPE PAUCHOE PAUCH  [1] Adverse events with frequency >=1% in the 10 mg Overall group. Grade A and 4 are based on National Cancer Institute Common Toxicity Criteria version 2.	ASTHENIA	
HYPOXIA PLEURAL EFFUSION PNEUMONITIS NOS 2 (1.4) PULMONARY HYPERTENSION NOS 2 (1.4) VOMITING NOS 2 (1.4) SWEATING INCREASED 2 (1.4) ARTHRALGIA PAIN IN LIMB HEADACHE SYNCOPE 2 (1.4)  [1] Adverse events with frequency >=1% in the 10 mg Overall group. Grade 3 and 4 are based on National Cancer Institute Common Toxicity Criteria version 2.  [2] Preferred Terms are coded using the MedDRA dictionary. A patient	MULTI-ORGAN FAILURE	2 (1.4)
PLEURAL EFFUSION PNEUMONITIS NOS 2 (1.4) PULMONARY HYPERTENSION NOS 2 (1.4) VOMITING NOS 2 (1.4) SWEATING INCREASED 2 (1.4) ARTHRALGIA PAIN IN LIMB HEADACHE SYNCOPE 2 (1.4) Adverse events with frequency >=1% in the 10 mg Overall group. Grade 3 and 4 are based on National Cancer Institute Common Toxicity Criteria version 2.  [2] Preferred Terms are coded using the MedDRA dictionary. A patient	EPISTAXIS	
PNEUMONITIS NOS PULMONARY HYPERTENSION NOS 2 (1.4) VOMITING NOS SWEATING INCREASED 2 (1.4) ARTHRALGIA PAIN IN LIMB HEADACHE SYNCOPE 2 (1.4)  [1] Adverse events with frequency >=1% in the 10 mg Overall group. Grade 3 and 4 are based on National Cancer Institute Common Toxicity Criteria version 2.  [2] Preferred Terms are coded using the MedDRA dictionary. A patient	HYPOXIA	
PULMONARY HYPERTENSION NOS  VOMITING NOS  SWEATING INCREASED  ARTHRALGIA  PAIN IN LIMB  HEADACHE  SYNCOPE  2 (1.4)  Adverse events with frequency >=1% in the 10 mg Overall group. Grade  3 and 4 are based on National Cancer Institute Common Toxicity  Criteria version 2.  [2] Preferred Terms are coded using the MedDRA dictionary. A patient		
VOMITING NOS  SWEATING INCREASED  ARTHRALGIA  PAIN IN LIMB  HEADACHE  SYNCOPE  [1] Adverse events with frequency >=1% in the 10 mg Overall group. Grade  3 and 4 are based on National Cancer Institute Common Toxicity  Criteria version 2.  [2] Preferred Terms are coded using the MedDRA dictionary. A patient	PNEUMONITIS NOS	
SWEATING INCREASED  ARTHRALGIA PAIN IN LIMB  HEADACHE SYNCOPE  [1] Adverse events with frequency >=1% in the 10 mg Overall group. Grade 3 and 4 are based on National Cancer Institute Common Toxicity Criteria version 2.  [2] Preferred Terms are coded using the MedDRA dictionary. A patient	PULMONARY HYPERTENSION NOS	
ARTHRALGIA PAIN IN LIMB  HEADACHE SYNCOPE  [1] Adverse events with frequency >=1% in the 10 mg Overall group. Grade 3 and 4 are based on National Cancer Institute Common Toxicity Criteria version 2.  [2] Preferred Terms are coded using the MedDRA dictionary. A patient		
PAIN IN LIMB  HEADACHE  SYNCOPE  2 (1.4)  2 (1.4)  2 (1.4)  2 (1.4)  2 (1.4)  2 (1.4)  1] Adverse events with frequency >=1% in the 10 mg Overall group. Grade  3 and 4 are based on National Cancer Institute Common Toxicity  Criteria version 2.  [2] Preferred Terms are coded using the MedDRA dictionary. A patient		
HEADACHE SYNCOPE 2 (1.4) 2 (1.4)  [1] Adverse events with frequency >=1% in the 10 mg Overall group. Grade 3 and 4 are based on National Cancer Institute Common Toxicity Criteria version 2.  [2] Preferred Terms are coded using the MedDRA dictionary. A patient		
SYNCOPE  2 (1.4)  [1] Adverse events with frequency >=1% in the 10 mg Overall group. Grade 3 and 4 are based on National Cancer Institute Common Toxicity Criteria version 2.  [2] Preferred Terms are coded using the MedDRA dictionary. A patient	PAIN IN LIMB	
<ul><li>[1] Adverse events with frequency &gt;=1% in the 10 mg Overall group. Grade 3 and 4 are based on National Cancer Institute Common Toxicity Criteria version 2.</li><li>[2] Preferred Terms are coded using the MedDRA dictionary. A patient</li></ul>		, , ,
3 and 4 are based on National Cancer Institute Common Toxicity Criteria version 2. [2] Preferred Terms are coded using the MedDRA dictionary. A patient		, ,
Criteria version 2. [2] Preferred Terms are coded using the MedDRA dictionary. A patient		
[2] Preferred Terms are coded using the MedDRA dictionary. A patient		Toxicity
	Criteria version 2.	
with multiple equipments of an AF is counted only once in the		
	with multiple occurrences of an AE is counted only one	ce in the
Preferred Term category.	Preferred Term category.	

- In other clinical studies of REVLIMID<sup>®</sup> (lenalidomide) in MDS patients, the following serious adverse events (regardless of relationship to study drug treatment) not described in Table 4 or 5 were reported:
- 545 **Blood and lymphatic system disorders:** warm type hemolytic anemia, splenic 546 infarction, bone marrow depression NOS, coagulopathy, hemolysis NOS, hemolytic 547 anemia NOS, refractory anemia
- Cardiac disorders: cardiac failure congestive, atrial fibrillation, angina pectoris, cardiac arrest, cardiac failure NOS, cardio-respiratory arrest, cardiomyopathy NOS, myocardial infarction, myocardial ischemia, atrial fibrillation aggravated, bradycardia NOS, cardiogenic shock, pulmonary edema NOS, supraventricular arrhythmia NOS, tachyarrhythmia, ventricular dysfunction
- 553 Ear and labyrinth disorders: vertigo
- 554 **Endocrine disorders:** Basedow's disease
- Gastrointestinal disorders: gastrointestinal hemorrhage NOS, colitis ischemic, intestinal perforation NOS, rectal hemorrhage, colonic polyp, diverticulitis NOS, dysphagia, gastritis NOS, gastroenteritis NOS, gastroesophageal reflux disease, obstructive inguinal hernia, irritable bowel syndrome, melena, pancreatitis due to biliary obstruction, pancreatitis NOS, perirectal abscess, small intestinal obstruction NOS, upper gastrointestinal hemorrhage

561 562	General disorders and administration site conditions: disease progression NOS, fall, gait abnormal, intermittent pyrexia, nodule, rigors, sudden death
563 564	<b>Hepatobiliary disorders:</b> hyperbilirubinemia, cholecystitis acute NOS, cholecystitis NOS, hepatic failure
565	Immune system disorders: hypersensitivity NOS
566 567 568 569 570	<b>Infections and infestations:</b> infection NOS, bacteremia, central line infection, clostridial infection NOS, ear infection NOS, <i>Enterobacter</i> sepsis, fungal infection NOS, herpes viral infection NOS, influenza, kidney infection NOS, <i>Klebsiella</i> sepsis, lobar pneumonia NOS, localized infection, oral infection, <i>Pseudomonas</i> infection NOS, septic shock, sinusitis acute NOS, sinusitis NOS, <i>Staphylococcal</i> infection, urosepsis
571 572 573 574	<b>Injury, poisoning and procedural complications:</b> femur fracture, transfusion reaction, cervical vertebral fracture, femoral neck fracture, fractured pelvis NOS, hip fracture, overdose NOS, post procedural hemorrhage, rib fracture, road traffic accident, spinal compression fracture
575 576	<b>Investigations:</b> blood creatinine increased, culture NOS negative, hemoglobin decreased liver function tests NOS abnormal, troponin I increased
577 578	<b>Metabolism and nutrition disorders:</b> dehydration, gout, hypernatremia, hypoglycemia NOS
579 580	Musculoskeletal and connective tissue disorders: arthritis NOS, arthritis NOS aggravated, gouty arthritis, neck pain, chondrocalcinosis pyrophosphate
581 582 583	Neoplasms benign, malignant and unspecified: acute leukemia NOS, acute myeloid leukemia NOS, bronchoalveolar carcinoma, lung cancer metastatic, lymphoma NOS, prostate cancer metastatic
584 585 586	<b>Nervous system disorders:</b> cerebrovascular accident, aphasia, cerebellar infarction, cerebral infarction, depressed level of consciousness, dysarthria, migraine NOS, spinal cord compression NOS, subarachnoid hemorrhage NOS, transient ischemic attack
587	Psychiatric disorders: confusional state
588 589	<b>Renal and urinary disorders:</b> renal failure NOS, hematuria, renal failure acute, azotemia, calculus ureteric, renal mass NOS
590	Reproductive system and breast disorders: pelvic pain NOS
591 592 593	<b>Respiratory, thoracic and mediastinal disorders:</b> bronchitis NOS, chronic obstructive airways disease exacerbated, respiratory failure, dyspnea exacerbated, interstitial lung disease, lung infiltration NOS, wheezing
594	Skin and subcutaneous tissue disorders: acute febrile neutrophilic dermatosis

595 **Vascular system disorders:** deep vein thrombosis, hypotension NOS, aortic disorder, 596 ischemia NOS, thrombophlebitis superficial, thrombosis 597 **Multiple Myeloma** 598 599 Data were evaluated from 691 patients in two studies who received at least one dose of REVLIMID<sup>®</sup> (lenalidomide)/dexamethasone (346 patients) or placebo/dexamethasone 600 (345 patients). In the REVLIMID® (lenalidomide) /dexamethasone treatment group, 151 601 patients (45%) underwent at least one dose interruption with or without a dose reduction 602 603 of REVLIMID® (lenalidomide) compared to 21% in the placebo/dexamethasone treatment group. Of these patients who had one dose interruption with or without a dose 604 605 reduction, 50% in the REVLIMID® (lenalidomide) /dexamethasone treatment group underwent at least one additional dose interruption with or without a dose reduction 606 607 compared to 21% in the placebo/dexamethasone treatment group. Most adverse events 608 and Grade 3/4 adverse events were more frequent in patients who received the combination of REVLIMID® (lenalidomide)/dexamethasone compared to 609 placebo/dexamethasone. 610 611 612 Table 6 summarizes the number and percentage of patients with Grade 1-4 adverse events reported in  $\geq 10\%$  of patients in either treatment group in Studies 1 and 2. 613 614

Table 6: Number of Patients with Adverse Events Reported in at Least 10% of Patients			
in Either Treatment Group in St			
(Safety population)			
	Revlimid/Dex N=346)	Placebo/Dex (N=345)	
System organ class/ Preferred term	n (%)	n (%)	
Subjects with at least one adverse event	346 (100.0)	344 ( 99.7)	
BLOOD AND LYMPHATIC SYSTEM DISORDERS	(====,		
NEUTROPENIA	96 (27.7)	16 ( 4.6)	
ANAEMIA NOS	84 ( 24.3)	60 (17.4)	
THROMBOCYTOPENIA	59 ( 17.1)		
EYE DISORDERS	, , , , , , , , , , , , , , , , , , , ,	, ,	
VISION BLURRED	51 ( 14.7)	36 (10.4)	
GASTROINTESTINAL DISORDERS			
CONSTIPATION	134 ( 38.7)	64 ( 18.6)	
DIARRHOEA NOS	101 (29.2)	85 ( 24.6)	
NAUSEA	76 ( 22.0)	66 (19.1)	
DYSPEPSIA	48 (13.9)	46 (13.3)	
VOMITING NOS		28 ( 8.1)	
GENERAL DISORDERS AND ADMINISTRATION SITE CONDITIONS	·		
FATIGUE	133 ( 38.4)	129 ( 37.4)	
ASTHENIA	81 (23.4)	86 (24.9)	
PYREXIA	80 (23.1)	67 ( 19.4)	
OEDEMA PERIPHERAL	73 ( 21.1)	65 ( 18.8)	
INFECTIONS AND INFESTATIONS			
UPPER RESPIRATORY TRACT INFECTION NOS	47 ( 13.6)	43 ( 12.5)	
PNEUMONIA NOS	39 (11.3)	26 ( 7.5)	
INVESTIGATIONS			
WEIGHT DECREASED	63 ( 18.2)	48 ( 13.9)	
METABOLISM AND NUTRITION DISORDERS			
HYPERGLYCAEMIA NOS	52 ( 15.0)	49 ( 14.2)	
ANOREXIA	47 ( 13.6)	30 ( 8.7)	
HYPOKALAEMIA	39 ( 11.3)	18 ( 5.2)	
MUSCULOSKELETAL AND CONNECTIVE TISSUE DISORDERS			
MUSCLE CRAMP	104 ( 30.1)	71 ( 20.6)	
BACK PAIN	53 ( 15.3)	49 ( 14.2)	
MUSCLE WEAKNESS NOS	52 ( 15.0)	53 ( 15.4)	
ARTHRALGIA	36 ( 10.4)	51 ( 14.8)	
NERVOUS SYSTEM DISORDERS	·		
HEADACHE	74 ( 21.4)	74 ( 21.4)	
DIZZINESS	72 ( 20.8)	53 ( 15.4)	
TREMOR	68 (19.7)		
DYSGEUSIA	46 (13.3)		
PARAESTHESIA	40 (11.6)	43 ( 12.5)	
PSYCHIATRIC DISORDERS			
INSOMNIA	111 ( 32.1)	128 ( 37.1)	
RESPIRATORY, THORACIC AND MEDIASTINAL DISORDERS			
DYSPNOEA NOS	70 ( 20.2)	53 ( 15.4)	
COUGH	50 ( 14.5)	71 ( 20.6)	
SKIN AND SUBCUTANEOUS TISSUE DISORDERS			
RASH NOS	55 ( 15.9)	28 ( 8.1)	
VASCULAR DISORDERS			
DEEP VEIN THROMBOSIS <sup>a</sup>	27( 7.8)	11 ( 3.2)	
PULMONARY EMBOLISM <sup>a</sup>	11 ( 3.2)	3 ( 0.9)	
a Saa WADNINGS		·	

616 <sup>a</sup> See WARNINGS

Table 7 summarizes the Grade 3/4 adverse events reported in ≥2% of patients in either treatment group in Studies 1 and 2.

Table 7:Adverse Events with NCI CTC Grades 3 and 4 Reported In At Least 2% of Patients by Preferred  Term and Treatment Group - (Safety Population)							
		Limid/De	_		Placebo/De	ex (N=3	45)
	Grac		Grad		Grade 3	Grad	
System organ class/ Preferred term	n	(용)	n	(용)	n (%)	n	(%)
Patients with at least one Grade 3 or 4 AE	225 (	(65.0)	25 (	7.2)	186 ( 53.9)	31 (	9.0)
BLOOD AND LYMPHATIC SYSTEM DISORDERS							
NEUTROPENIA	60 (	( 17.3)	13 (	3.8)	8 ( 2.3)	2 (	0.6)
THROMBOCYTOPENIA	31 (	( 9.0)	4 (	1.2)	16 ( 4.6)	3 (	0.9)
ANAEMIA NOS	25 (	(7.2)	4 (	1.2)	10 ( 2.9)	2 (	0.6)
LEUKOPENIA NOS	12 (	( 3.5)	0 (	0.0)	1 ( 0.3)	0 (	0.0)
LYMPHOPENIA	8 (	( 2.3)	0 (	0.0)	4 ( 1.2)	0 (	0.0)
CARDIAC DISORDERS							
ATRIAL FIBRILLATION	9 (	( 2.6)	1 (	0.3)	2 ( 0.6)	1 (	0.3)
GASTROINTESTINAL DISORDERS							
DIARRHOEA NOS	8 (	( 2.3)	0 (	0.0)	2 ( 0.6)	0 (	0.0)
CONSTIPATION	7 (	( 2.0)	0 (	0.0)	1 ( 0.3)	0 (	0.0)
GENERAL DISORDERS AND ADMINISTRATION SITE CONDITIONS		·					
FATIGUE	20 (	(5.8)	1 (	0.3)	13 ( 3.8)	0 (	0.0)
ASTHENIA	14	,	0 (	0.0)	16 ( 4.6)	0 (	,
PYREXIA	4	( 1.2)	0 (	0.0)	8 ( 2.3)	0 (	0.0)
INFECTIONS AND INFESTATIONS			- '			- \	
PNEUMONIA NOS	18 (	(5.2)	4 (	1.2)	15 ( 4.3)	3 (	0.9)
METABOLISM AND NUTRITION DISORDERS			,			- \	,
HYPERGLYCAEMIA NOS	22 (	(6.4)	4 (	1.2)	19 ( 5.5)	7 (	2.0)
HYPOCALCAEMIA	8 (	, ,	5 (	1.4)	4 ( 1.2)	1 (	0.3)
HYPOKALAEMIA	9 (	( 2.6)	1 (	0.3)	5 ( 1.4)	0 (	0.0)
MUSCULOSKELETAL AND CONNECTIVE TISSUE DISORDERS			- (	0.07	0 ( 1.1/	٠ ,	0.07
MUSCLE WEAKNESS NOS	18 (	(5.2)	0 (	0.0)	10 ( 2.9)	0 (	0.0)
NERVOUS SYSTEM DISORDERS		. 0.27	٠ ,	0.07	10 ( 2.3)	٠ ,	0.07
SYNCOPE	7 (	( 2.0)	0 (	0.0)	3 ( 0.9)	0 (	0.0)
NEUROPATHY NOS	7	. ,	0 (	0.0)	2 ( 0.6)	0 (	0.0)
PSYCHIATRIC DISORDERS	, ,	, 2.0)	0 (	0.0)	2 ( 0.0)	0 (	0.0)
DEPRESSION	9 (	( 2.6)	0 (	0.0)	5 ( 1.4)	1 (	0.3)
CONFUSIONAL STATE	6 (	,	0 (	0.0)	8 ( 2.3)	0 (	0.0)
RESPIRATORY, THORACIC AND MEDIASTINAL DISORDERS	0 (	<u> </u>	0 (	0.0)	0 ( 2.3)	0 (	0.0)
,	6	/ 1 7\	2 /	0 0)	7 / 2 0\	1 /	0 31
DYSPNOEA NOS	6 (	( 1.7)	3 (	0.9)	7 ( 2.0)	1 (	0.3)
VASCULAR DISORDERS	0.0	, , ,	<i>.</i>	0 2)	0 / 0 5	4 .	0 0:
DEEP VEIN THROMBOSIS <sup>a</sup>	23 (	( 6.6)	1 (	0.3)	9 ( 2.6)	1 (	0.3)
PULMONARY EMBOLISM <sup>a</sup>	2 (	( 0.6)	9 (	2.6)	1 ( 0.3)	2 (	0.6)

620 <sup>a</sup> See WARNINGS

621	
622	Thrombotic Events (See WARNINGS)
623 624 625 626 627 628	In the pooled analysis, thrombotic or thromboembolic events, including deep vein thrombosis , pulmonary embolism, thrombosis, and intracranial venous sinus thrombosis were reported more frequently in patients treated with the REVLIMID® (lenalidomide)/dexamethasone combination. The number of patients experiencing a thrombotic event in the combination arm were $43/346$ (12%) compared with those in the placebo/dexamethasone arm $14/345$ (4%).
629 630 631	In these and other clinical studies of REVLIMID <sup>®</sup> (lenalidomide) in patients with multiple myeloma, the following serious adverse events (considered related to study drug treatment) not described in Table 7 were reported:
632	Blood and lymphatic system disorders: pancytopenia, anemia NOS aggravated
633	Cardiac disorders: cardiac failure congestive, atrial flutter, pulmonary edema
634	Endocrine disorders: adrenal insufficiency NOS, acquired hypothyroidism
635	Eye disorders: blindness
636 637 638	<b>Gastrointestinal disorders:</b> abdominal pain NOS, colitis pseudomembranous, gastritis NOS, gastrointestinal hemorrhage NOS, peptic ulcer hemorrhage, upper gastrointestinal hemorrhage
639	General disorders and administration site conditions: performance status decreased
640	Hepatobiliary disorders: hepatic failure, hepatitis toxic
641 642 643 644 645 646 647	<b>Infections and infestations:</b> bronchopneumonia NOS, cellulitis, <i>Pneumocystis carnii</i> pneumonia, sepsis NOS, bursitis infective NOS, cellulitis staphylococcal, <i>Enterobacter</i> bacteremia, Escherichia sepsis, gastrointestinal infection NOS, herpes zoster, herpes zoster ophthalmic, infection NOS, lung infection NOS, neutropenic sepsis, pneumonia bacterial NOS, pneumonia cytomegaloviral, pneumonia pneumoccal, pneumonia primary atypical, pneumonia staphylococcal, septic shock, streptococcal sepsis, subacute endocarditis, urinary tract infection NOS
648 649 650	<b>Investigations:</b> International normalized ratio increased, weight decreased, blood creatinine increased, body temperature increased, c-reactive protein increased, hemoglobin decreased, white blood cell count decreased
651 652	<b>Metabolism and nutrition disorders:</b> dehydration, diabetes mellitus NOS, diabetes with hyperosmolarity, diabetic ketoacidosis
653 654	Musculoskeletal and connective tissue disorders: myopathy steroid, back pain, myopathy
655 656 657 658	<b>Nervous system disorders:</b> dizziness, memory impairment, brain edema, cerebral infarction, cerebral ischemia, cerebrovascular accident, encephalitis NOS, intracranial hemorrhage NOS, intracranial venous sinus thrombosis NOS, leukoencephalopathy, somnolence, tremor

659 660	<b>Psychiatric disorders:</b> mental status of psychotic disorder NOS	hanges, delirium, delusion NOS, insomnia,	
661 662	<b>Renal and urinary disorders:</b> Fanconi syndrome acquired, hematuria, renal failure acute, renal failure NOS, renal tubular necrosis, urinary retention		
663	Respiratory, thoracic and mediasting	al disorders: bronchopneumopathy, hypoxia	
664	Skin and subcutaneous tissue disord	ers: rash NOS, skin desquamation NOS	
665 666 667	v	NOS, venous thrombosis NOS limb, circulatory on NOS, orthostatic hypotension, peripheral	
668	OVERDOSAGE		
669	No cases of overdose have been report	ed during the clinical studies.	
670	DOSAGE AND ADMINISTRATION	N	
671	Myelodysplastic Syndromes		
672 673 674	The recommended starting dose of REVLIMID <sup>®</sup> (lenalidomide) is 10 mg daily with water. Patients should not break, chew or open the capsules. Dosing is continued or modified based upon clinical and laboratory findings.		
675 676 677 678	This drug is known to be substantially excreted by the kidney, and the risk of toxic reactions to this drug may be greater in patients with impaired renal function. Because elderly patients are more likely to have decreased renal function, care should be taken in dose selection, and it would be prudent to monitor renal function.		
679	Dose Adjustments During Treatmen	t:	
680 681	Patients who are dosed initially at 10 mg and who experience thrombocytopenia should have their dosage adjusted as follows:		
682	Platelet counts		
683	If thrombocytopenia develops WITHIN 4 weeks of starting treatment at 10 mg daily		
	If baseline ≥100,000/mcL	<u> </u>	
	When	Recommended	
	Platelets	Course	
	Fall to <50,000/mcL	Interrupt REVLIMID® treatment	
	Return to ≥50,000/mcL	Resume REVLIMID® at 5 mg daily	
	If baseline <100,000/mcL		

When

Platelets

Fall to 50% of the baseline value If baseline ≥60,000/mcL and returns to ≥50,000/mcL

Recommended

Course
Interrupt REVLIMID® treatment
Resume REVLIMID® at 5 mg daily

If baseline <60,000/mcL and	Resume REVLIMID® at 5 mg daily
returns to >30 000/mcL	

If thrombocytopenia develops AFTER 4 weeks of starting treatment at 10 mg daily

When	Recommended
Platelets	Course
<30,000/mcL or <50,000/mcL	Interrupt REVLIMID® treatment
and platelet transfusions	
Return to ≥30,000/mcL	Resume REVLIMID® at 5 mg daily
(without hemostatic failure)	

Patients who experience thrombocytopenia at 5 mg daily should have their dosage 686

adjusted as follows: 687

688 If thrombocytopenia develops during treatment at 5 mg daily

When	Recommended
Platelets	Course
<30,000/mcL or <50,000/mcL	Interrupt REVLIMID® treatment
and platelet transfusions	
Return to ≥30,000/mcL	Resume REVLIMID® at 5 mg every
(without hemostatic failure)	other day

- 689 Patients who are dosed initially at 10 mg and experience neutropenia should have their
- dosage adjusted as follows: 690

#### 691 **Neutrophil counts (ANC)**<sup>+</sup>

692 If neutropenia develops WITHIN 4 weeks of starting treatment at 10 mg daily

If baseline ANC ≥1,000/mcL	
When	Recommended
Neutrophils	Course
Fall to <750/mcL	Interrupt REVLIMID® treatment
Return to ≥1,000/mcL	Resume REVLIMID® at 5 mg daily
If baseline ANC <1,000/mcL	
When	Recommended
Neutrophils	Course
Neutrophils Fall to <500/mcL	Interrupt REVLIMID® treatment

693 694

If neutropenia develops AFTER 4 weeks of starting treatment at 10 mg daily

When	Recommended
Neutrophils	Course
<500/mcL for ≥7 days or <500/mcL	Interrupt REVLIMID® treatment
associated with fever (≥38.5°C)	-
Return to ≥500/mcL	Resume REVLIMID® at 5 mg daily

695 Patients who experience neutropenia at 5 mg daily should have their dosage adjusted as

696 follows: 697 If neutropenia develops during treatment at 5 mg daily

When	Recommended
Neutrophils	Course
<500/mcL for ≥7 days or <500/mcL associated with fever (≥38.5°C)	Interrupt REVLIMID® treatment
Return to ≥500/mcL	Resume REVLIMID® at 5 mg every other day

698 Absolute neutrophil count

# 700 Multiple Myeloma

- 701 The recommended starting dose of REVLIMID® (lenalidomide) is 25 mg/day with water
- orally administered as a single 25 mg capsule on Days 1-21 of repeated 28-day cycles.
- Patients should not break, chew or open the capsules. The recommended dose of
- dexamethasone is 40 mg/day on Days 1-4, 9-12, and 17-20 of each 28-day cycle for the
- first 4 cycles of therapy and then 40 mg/day orally on Days 1-4 every 28 days. Dosing is
- continued or modified based upon clinical and laboratory findings.
- 707 The effect of substituting lesser strengths of REVLIMID® (lenalidomide) to achieve a 25
- mg capsule dose is unknown.

# 709 **Dose Adjustments During Treatment**:

- 710 Dose modification guidelines, as summarized below are recommended to manage Grade
- 3 or 4 neutropenia or thrombocytopenia or other Grade 3 or 4 toxicity judged to be
- 712 related to lenalidomide.

## 713 Platelet counts

714 Thrombocytopenia

Recommended Course
Interrupt REVLIMID® treatment,
follow CBC weekly
Restart REVLIMID® at 15 mg daily
Interrupt REVLIMID® treatment
Resume REVLIMID® at 5 mg less
than the previous dose. Do not dose
below 5 mg daily

## 715 Neutrophil counts (ANC)

## 716 **Neutropenia**

When Neutrophils	Recommended Course
Fall to <1000/mcL	Interrupt REVLIMID® treatment,
	add G-CSF, follow CBC weekly
Return to ≥1,000/mcL and neutropenia is	Resume REVLIMID® at 25 mg
the only toxicity	daily.
Return to $\geq 1,000/\text{mcL}$ and if other toxicity	Resume REVLIMID® at 15 mg

	daily
For each subsequent drop <1,000/mcL Return to ≥1,000/mcL	Interrupt REVLIMID® treatment Resume REVLIMID® at 5 mg less than the previous dose. Do not dose below 5 mg daily
Other Grade 3/4 Toxicities For other Grade 3/4 toxicities judged to be re restart at next lower dose level when toxicity	· · · · · · · · · · · · · · · · · · ·
HOW SUPPLIED	
REVLIMID <sup>®</sup> (lenalidomide) 5 mg, 10 mg, 1 through the RevAssist <sup>SM</sup> program. (See INFO	5 mg and 25 mg capsules will be supplied ORMATION FOR PATIENTS)
REVLIMID® (lenalidomide) is supplied as:	
White opaque capsules imprinted "REV" on black ink:	one half and "5 mg" on the other half in
5 mg bottles of 30 (NDC 59572-405-30)	
5 mg bottles of 100 (NDC 59572-405-00)	
Blue/green and pale yellow opaque capsules on the other half in black ink:	imprinted "REV" on one half and "10 mg"
10 mg bottles of 30 (NDC 59572-410-30)	
10 mg bottles of 100 (NDC 59572-410-00)	
Powder blue and white opaque capsules impressed the other half in black ink:	inted "REV" on one half and "15 mg" on
15 mg bottles of 21 (NDC 59572-415-21)	
15 mg bottles of 100 (NDC 59572-415-00)	
White opaque capsules imprinted "REV" on black ink:	one half and "25 mg" on the other half in
25 mg bottles of 25 (NDC 59572-425-25)	
25 mg bottles of 100 (NDC 59572-425-00)	
Storage and Dispensing	
Dispense no more than a 28-day supply.	

- Store at 25 °C (77 °F); excursions permitted to 15-30 °C (59-86 °F). [See USP Controlled
- Room Temperature].
- 745 Rx only.
- 746 Manufactured for Celgene Corporation
- 747 86 Morris Avenue
- 748 Summit, NJ 07901
- 749 Important Information and Warnings for All Patients Taking REVLIMID®
- 750 (lenalidomide)
- 751 WARNING: POTENTIAL FOR HUMAN BIRTH DEFECTS.
- 752 LENALIDOMIDE IS AN ANALOGUE OF THALIDOMIDE. THALIDOMIDE IS
- 753 A KNOWN HUMAN TERATOGEN THAT CAUSES LIFE-THREATENING
- 754 | HUMAN DEFECTS. IF LENALIDOMIDE IS TAKEN DURING PREGNANCY,
- 755 IT MAY CAUSE BIRTH DEFECTS OR DEATH TO AN UNBORN BABY.
- 756 FEMALES SHOULD BE ADVISED TO AVOID PREGNANCY WHILE ON
- 757 **LENALIDOMIDE.**
- 758 All Patients
- The patient understands that birth defects may occur with the use of REVLIMID® (lenalidomide).
- The patient has been warned by his/her doctor that an unborn baby may have birth defects and can even die, if a female is pregnant or becomes pregnant while taking REVLIMID® (lenalidomide).
- REVLIMID<sup>®</sup> (lenalidomide) will be prescribed ONLY for the patient and must NOT be shared with ANYONE, even someone who has similar symptoms.
- REVLIMID<sup>®</sup> (lenalidomide) must be kept out of the reach of children and should NEVER be given to females who are able to have children.
- The patient cannot donate blood while taking REVLIMID® (lenalidomide).
- The patient has read the REVLIMID® (lenalidomide) patient brochure and understands the contents, including other possible health problems from REVLIMID® (lenalidomide), "side effects."
- The patient's doctor has answered any questions the patient has asked.
- The patient must participate in a telephone survey and patient registry, while taking REVLIMID<sup>®</sup> (lenalidomide).

# 775 Female Patients of Childbearing Potential

- The patient must not take REVLIMID® (lenalidomide) if she is pregnant, breast-feeding a baby, or able to get pregnant and not using the required two methods of birth control.
- The patient confirms that she is not now pregnant, nor will she try to become pregnant during REVLIMID<sup>®</sup> (lenalidomide) therapy, during therapy interruption and for at least 4 weeks after she has completely finished taking REVLIMID<sup>®</sup> (lenalidomide).
- If the patient is able to become pregnant, she must use at least one highly effective method and one additional effective method of birth control (contraception) AT THE SAME TIME:
- 786 At least one highly effective method AND One additional effective method
- 787 IUD Latex condom
- Hormonal (birth control pills, injections, patch or implants) Diaphragm
- 789 Tubal ligation Cervical cap
- 790 Partner's vasectomy
- These birth control methods must be used for at least 4 weeks before beginning REVLIMID<sup>®</sup> (lenalidomide) therapy, during REVLIMID<sup>®</sup> (lenalidomide) therapy, during therapy interruption and for 4 weeks following discontinuation of REVLIMID<sup>®</sup> (lenalidomide) therapy.
- The patient must use these birth control methods unless she <u>completely abstains from</u> heterosexual sexual contact.
- If a hormonal method (birth control pills, injections, patch or implants) or IUD is not medically possible for the patient, she may use another highly effective method or two barrier methods AT THE SAME TIME.
- The patient must have a pregnancy test done by her doctor within 10-14 days and 24 hours before REVLIMID® (lenalidomide) therapy, then weekly during the first 4 weeks of REVLIMID® (lenalidomide) therapy.
- Thereafter, the patient must have a pregnancy test <u>every 4 weeks</u> if she has regular menstrual cycles, or <u>every 2 weeks</u> if her cycles are irregular while she is taking REVLIMID® (lenalidomide).
- The patient must immediately stop taking REVLIMID® (lenalidomide) and inform her doctor:

808 o If she becomes pregnant while taking the drug 809 If she misses her menstrual period, or experiences unusual menstrual 810 bleeding 811 If she stops using birth control 812 If she thinks FOR ANY REASON that she may be pregnant 813 The patient understands that if her doctor is not available, she can call 1-814 888-668-2528 for information on emergency contraception 815 Female Patients Not of Childbearing Potential 816 The patient certifies that she is not now pregnant, nor of childbearing potential as 817 she has been postmenopausal naturally for at least 24 months (been through the change of life); or she has had a hysterectomy or bilateral oophorectomy. 818 819 The patient or guardian certifies that a prepubertal female child is not now 820 pregnant, nor is of childbearing potential as menstruation has not vet begun. and/or the child will not be engaging in heterosexual sexual contact for at least 4 821 weeks before REVLIMID<sup>®</sup> (lenalidomide) therapy, during REVLIMID<sup>®</sup> 822 (lenalidomide) therapy, during therapy interruption and for at least 4 weeks after 823 824 stopping therapy. 825 **Male Patients** 826 The patient has been told by his doctor that he must NEVER have unprotected sexual contact with a female who can become pregnant. 827 • Because it is not known whether REVLIMID® (lenalidomide) is present in semen. 828 his doctor has explained that he must either completely abstain from sexual 829 830 contact with females who are pregnant or able to become pregnant, or he must use 831 a latex condom EVERY TIME he engages in any sexual contact with females who are pregnant or may become pregnant while he is taking REVLIMID® 832 833 (lenalidomide) and for 4 weeks after he stops taking the drug, even if he has had a 834 successful vasectomy. 835 • The patient should inform his doctor: 836 o If he has had unprotected sexual contact with a female who can become 837 pregnant 838 o If he thinks FOR ANY REASON, that his sexual partner may be pregnant. 839 The patient understands that if his doctor is not available, he can call 1-840 888-668-2528 for information on emergency contraception.

841 842	• The patient cannot donate semen or sperm while taking REVLIMID (lenalidomide).
843	
844	Information for patients and caregivers:
845	MEDICATION GUIDE
846	REVLIMID® (rev-li-mid)
847	(lenalidomide)
848 849 850 851	Read the Medication Guide that comes with REVLIMID® before you start taking it and each time you get a new prescription. There may be new information. This Medication Guide does not take the place of talking to your healthcare provider about your medical condition or your treatment.
853	What is the most important information I should know about REVLIMID®?
854 855	• REVLIMID <sup>®</sup> is only for patients who understand and agree to all of the instructions in the REVASSIST <sup>SM</sup> program.
856	• REVLIMID® may cause serious side effects including:
857 858 859 860	<ol> <li>birth defects</li> <li>low white blood cells and platelets</li> <li>blood clots in veins and in the lungs</li> </ol>
861 862 863	1. Possible birth defects (deformed babies) or death of an unborn baby. Female patients who are pregnant or who plan to become pregnant must not take REVLIMID <sup>®</sup> .
864 865 866	<b>REVLIMID</b> <sup>®</sup> is similar to the medicine thalidomide (THALOMID <sup>®</sup> ). We know thalidomide causes life-threatening birth defects. REVLIMID <sup>®</sup> has not been tested in pregnant women. REVLIMID <sup>®</sup> has harmed unborn animals in animal testing.
867 868 869 870 871	<ul> <li>Female patients must not get pregnant:</li> <li>for 4 weeks before starting REVLIMID<sup>®</sup></li> <li>while taking REVLIMID<sup>®</sup></li> <li>during dose interruptions of REVLIMID<sup>®</sup></li> <li>for 4 weeks after stopping REVLIMID<sup>®</sup></li> </ul>
872	It is not known if REVLIMID® passes into semen, so:
873 874	<ul> <li>Male patients, including those who have had a vasectomy, must use a latex condom during any sexual contact with a pregnant female or a female that can</li> </ul>

875 876	become pregnant while taking REVLIMID <sup>®</sup> and for 4 weeks after stopping REVLIMID <sup>®</sup> .
877 878 879 880 881 882	If you get pregnant while taking REVLIMID <sup>®</sup> , stop taking it right away and call your healthcare provider. Female partners of males taking REVLIMID <sup>®</sup> should call their healthcare provider right away if they get pregnant. Healthcare providers and patients should report all cases of pregnancy to:  • FDA MedWatch at 1-800-FDA-1088, and • Celgene Corporation at 1-888-423-5436
883 884 885 886 887 888 889	2. Low white blood cells (neutropenia) and low platelets (thrombocytopenia).  REVLIMID® causes low white blood cells and low platelets in most patients. You may need a blood transfusion or certain medicines if your blood counts drop too low. If you are being treated for del 5q myelodysplastic syndromes (MDS) your blood counts should be checked weekly during the first 8 weeks of treatment with REVLIMID®, and at least monthly thereafter. If you are being treated for multiple myeloma, your blood counts should be checked every 2 weeks for the first 12 weeks and then at least monthly thereafter.
891 892 893	<b>3. An increased chance for blood clots in veins and in the lungs.</b> Call your healthcare provider or get emergency medical care right away if you get the following signs or symptoms:
894 895 896 897	<ul> <li>shortness of breath</li> <li>chest pain</li> <li>arm or leg swelling</li> </ul>
898	What is REVLIMID® and what is it used for?
899 900 901 902 903 904 905	REVLIMID <sup>®</sup> is a medicine taken by mouth to treat certain patients who have myelodysplastic syndromes (MDS). Patients with MDS have bone marrow that does not produce enough mature blood cells. This causes a lack of healthy blood cells that can function properly in the body. There are different types of MDS. REVLIMID <sup>®</sup> is for the type of MDS with a chromosome problem where part of chromosome 5 is missing. This type of MDS is known as deletion 5q MDS. Patients with this type of MDS may have low red blood cell counts that require treatment with blood transfusions.
906 907 908 909 910 911 912	REVLIMID® is also used with dexamethasone to treat patients with multiple myeloma who have already had another treatment. Multiple myeloma is a cancer of plasma cells. Plasma cells are found in the bone marrow. Plasma cells produce a protein called antibodies. Some antibodies can attack and kill disease causing germs. Patients with this type of cancer may have low blood cell counts and immune problems giving them a higher chance for getting infections such as pneumonia. The bones can be affected leading to bone pain and breaks (fractures).
913	

- 914 REVLIMID® can only be:
- prescribed by healthcare providers who are registered in the RevAssist<sup>SM</sup> program
- dispensed by a pharmacy that is registered in the RevAssist<sup>SM</sup> program
- 917 given to patients who are registered in the RevAssist<sup>SM</sup> program and who agree to do everything required in the program
- 919 REVLIMID<sup>®</sup> has not been studied in children under 18 years of age.
- 920 Who should not take REVLIMID®?
- Do not take REVLIMID® if you are pregnant, plan to become pregnant, or
- become pregnant during REVLIMID® treatment. REVLIMID® may cause birth
- defects. See "What is the most important information I should know about
- 924 REVLIMID®?"
- **Do not take REVLIMID**® **if you are allergic to anything in it.** See the end of this Medication Guide for a complete list of ingredients in REVLIMID®.
- 927 What should I tell my healthcare provider before taking REVLIMID<sup>®</sup>?
- 928 Tell your healthcare provider about all of your medical conditions, including if you:
- are pregnant or breastfeeding. REVLIMID® must not be used by women who are pregnant or breastfeeding.
- Tell your healthcare provider about all the medicines you take including
- prescription and non-prescription medicines, vitamins and herbal supplements. It is
- 933 possible that REVLIMID® and other medicines may affect each other causing serious
- 934 side effects.
- 835 Know the medicines you take. Keep a list of them to show your healthcare provider and
- 936 pharmacist.
- 937 How should I take REVLIMID<sup>®</sup>?
- Take REVLIMID® exactly as prescribed. You must also follow all the instructions of
- the RevAssist<sup>SM</sup> program. Before prescribing REVLIMID<sup>®</sup>, your healthcare provider
- 940 will:
- explain the RevAssist<sup>SM</sup> program to you
- have you sign the Patient-Physician Agreement Form
- You will not be prescribed REVLIMID<sup>®</sup> if you cannot agree to or follow all of the
- 944 instructions of the RevAssist<sup>SM</sup> program.
- You will get no more than a 28-day supply of REVLIMID® at one time. This is to make
- 946 sure you follow the RevAssist<sup>SM</sup> program.

- Swallow REVLIMID<sup>®</sup> capsules whole with water once a day. Do not break, chew,
   or open your capsules.
- If you miss a dose of REVLIMID<sup>®</sup>, take it as soon as you remember that day. If you miss taking your dose for the entire day, go back to taking your regular dose the next day. Do **not** take 2 doses at the same time.
- If you take too much REVLIMID® or overdose, call your healthcare provider or poison control center right away.
- You will have regular blood tests during your treatment with REVLIMID<sup>®</sup>. If you are being treated for del 5q myelodysplastic syndromes (MDS) you should have your blood tested every week during your first 8 weeks of treatment, and at least monthly after that. If you are being treated for multiple myeloma, your blood counts should be checked every two weeks for the first 12 weeks and then at least monthly after that. Your healthcare provider may adjust your dose of REVLIMID<sup>®</sup> or interrupt your treatment based on the results of your blood tests and on your general condition.
- Female patients who can get pregnant will get regular pregnancy testing.
- get a pregnancy test weekly for 4 weeks.
- Female patients who can become pregnant must agree to use 2 separate forms of effective birth control at the same time, 4 weeks before, while taking, and for 4 weeks after stopping REVLIMID<sup>®</sup>.
- Male patients, even those who have had a vasectomy, must agree to use a latex condom during sexual contact with a pregnant female or a female who can become pregnant.
- 969 What should I avoid while taking REVLIMID®?
- **Do not get pregnant while taking REVLIMID**® and for 4 weeks after stopping REVLIMID®. See "What is the most important information I should know about REVLIMID®?"
- **Do not breastfeed while taking REVLIMID**<sup>®</sup>. We do not know if REVLIMID<sup>®</sup> passes into your milk and harms your baby.
- **Do not share REVLIMID**® **with other people**. It may cause birth defects and other serious problems.
- **Do not give blood** while you take REVLIMID<sup>®</sup> and for 4 weeks after stopping REVLIMID<sup>®</sup>. If someone who is pregnant gets your donated blood, her baby may be exposed to REVLIMID<sup>®</sup> and may be born with birth defects.

after stopping REVLIMID <sup>®</sup> . If a female who is trying to become pregnant gets your sperm, her baby may be exposed to REVLIMID <sup>®</sup> and may be born with birth defects.
What are the possible side effects of REVLIMID®?
• REVLIMID <sup>®</sup> may cause serious side effects including:
<ul> <li>birth defects</li> <li>low white blood cells and platelets</li> <li>blood clots in veins and in the lungs</li> </ul>
See "What is the most important information I should know about REVLIMID®?"
Other common side effects of REVLIMID® are:
<ul> <li>diarrhea</li> <li>itching</li> <li>rash</li> <li>tiredness</li> </ul>
Tell your healthcare provider about any side effect that bothers you or that does not go away.
These are not all the side effects with REVLIMID <sup>®</sup> . Ask your healthcare provider or pharmacist for more information.
How should I store REVLIMID®?
Store REVLIMID® at room temperature, 59° to 86°F (15° to 30° C).
Keep REVLIMID® and all medicines out of the reach of children.
General information about the safe and effective use of REVLIMID®
Medicines are sometimes prescribed for conditions that are not mentioned in Medication Guides. <b>Do not</b> take REVLIMID <sup>®</sup> for conditions for which it was not prescribed. <b>Do not</b> give REVLIMID <sup>®</sup> to other people, even if they have the same symptoms you have. It may harm them.
This Medication Guide provides a summary of the most important information about REVLIMID <sup>®</sup> . If you would like more information, talk with your healthcare provider. You can ask your healthcare provider or pharmacist for information about REVLIMID <sup>®</sup> that is written for health professionals. You can also call 1-888-423-5436 or visit www.REVLIMID.com.

What are the ingredients in REVLIMID®?

1013 1014	REVLIMID <sup>®</sup> (lenalidomide) capsules contain 5 mg, 10 mg, 15mg or 25 mg of lenalidomide and are available as gelatin capsules for oral administration.
1015 1016	The inactive ingredients of REVLIMID® capsules are: lactose anhydrous, microcrystalline cellulose, croscarmellose sodium, and magnesium stearate.
1017 1018 1019 1020	The 5 mg and 25 mg capsule shells contain gelatin, titanium dioxide and black ink. The 10 mg capsule shell contains gelatin, FD&C blue #2, yellow iron oxide, titanium dioxide and black ink. The 15 mg capsule shell contains gelatin, FD&C blue #2, titanium dioxide and black ink.
1021	Manufactured for Celgene Corporation
1022	Summit, NJ 07901
1023	This Medication Guide has been approved by the US Food and Drug Administration.



NDC 59572-405-30



5 mg

WARNING: POTENTIAL FOR HUMAN BIRTH DEFECTS.

Rx only 30 Capsi

Store at 25°C (77°F); excursions permitted to 15–30°C (59–86°F).

Manufactured for Celgene Corporation 86 Morris Avenue Summit, NJ 07901

See prescribing information for dosing and administration.

12/05 BT40530.002



30 Capsules © 2005 Celgene Corporation





NDC 59572-410-30



10 mg

WARNING: POTENTIAL FOR HUMAN BIRTH DEFECTS.

30 Capsules

OSG00497

Rx only

Store at 25°C (77°F); excursions permitted to 15–30°C (59–86°F).

Manufactured for Celgene Corporation 86 Morris Avenue Summit, NJ 07901

See prescribing information for dosing and administration.

12/05 BT41030.002



NDC 59572-410-00



Store at 25°C (77°F); excursions permitted to 15–30°C (59–86°F).

Manufactured for Celgene Corporation 86 Morris Avenue Summit, NJ 07901

See prescribing information for dosing and administration.

12/05 BT41000.002

10 mg

WARNING: POTENTIAL FOR HUMAN BIRTH DEFECTS.



OSG00498 Rx only

100 Capsules





NDC 59572-XXX-XX



15 mg

WARNING: POTENTIAL FOR HUMAN BIRTH DEFECTS.

Rx only

100 Capsules

Store at 25°C (77°F); excursions permitted to 15–30°C (59–86°F).

Manufactured for Celgene Corporation 86 Morris Avenue Summit, NJ 07901

See prescribing information for dosing and administration.

10/05 BTXXXXX.001







NDC 59572-XXX-XX



**25 mg** 

WARNING: POTENTIAL FOR HUMAN BIRTH DEFECTS.

Rx only

100 Capsules

Store at 25°C (77°F); excursions permitted to 15–30°C (59–86°F).

Manufactured for Celgene Corporation 86 Morris Avenue Summit, NJ 07901

See prescribing information for dosing and administration.

10/05 BTXXXXX.001

