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Note: Position of the pharma code and product name will change as per the folding machine feasibility

Revised: 10/2024



---WARNINGS AND PRECAUTIONS

- · <u>Myelosuppression</u>: Monitor absolute neutrophil count (ANC) and platelet count prior to each cycle and during treatment. Geriatric patients and women have a higher risk of developing myelosuppression. (5.1, 8.5)
- <u>Hepatotoxicity</u>: Fatal and severe hepatotoxicity have been reported. Perform liver tests at baseline, midway through the first cycle, prior to each subsequent cycle, and approximately 2 to 4 weeks after the last dose of temozolomide. (5.2)
- <u>Pneumocystis Pneumonia (PCP)</u>: Closely monitor all patients, particularly those receiving steroids, for the development of lymphopenia and PCP. (5.3)
 <u>Secondary Malignancies</u>: Myelodysplastic syndrome and secondary malignancies, including
- myeloid leukemia, have been observed. (5.4)
- <u>Embryo-Fetal Toxicity</u>: Can cause fetal harm. Advise females of reproductive potential of the potential risk to a fetus and to use effective contraception. Advise male patients with pregnant partners or female partners of reproductive potential to use condoms. (5.5, 8.1, 8.3)
- Exposure to Opened Capsules. Temozolomide capsules should not be opened, chewed, or dissolved but should be swallowed whole with a glass of water. (5.6)
 - ----ADVERSE REACTIONS --
- The most common adverse reactions (≥20%) are: alopecia, fatigue, nausea, vomiting, headache, constipation, anorexia, and convulsions. (6.1)
- The most common Grade 3 to 4 hematologic laboratory abnormalities (≥10%) in patients with anaplastic astrocytoma are: decreased lymphocytes, decreased platelets, decreased neutrophils, and decreased leukocytes. (6.1)
- To report SUSPECTED ADVERSE REACTIONS, contact Hetero Labs Limited at 1-866-495-1995 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.
- --USE IN SPECIFIC POPULATIONS Lactation: Advise not to breastfeed. (8.2)
- See 17 for PATIENT COUNSELING INFORMATION and FDA-approved patient labeling

For severe mvelosuppression, withhold temozolomide and then resume at same or reduced dose, or manently discontinue, based on occurrence [see Dosage and Administration (2.1, 2.2, 2.3)].

5.2 Hepatotoxicity

Fatal and severe hepatotoxicity have been reported in patients receiving temozolomide. Perform liver tests at baseline, midway through the first cycle, prior to each subsequent cycle, and approximately two to four weeks after the last dose of temozolomide.

5.3 Pneumocystis Pneumonia

Pneumocystis pneumonia (PCP) has been reported in patients receiving temozolomide. The risk of PCP is increased in patients receiving steroids or with longer treatment regimens of temozolomide. For patients with newly diagnosed glioblastoma, provide PCP prophylaxis for all patients during the concomitant phase. Continue PCP prophylaxis in patients who experience lymphopenia, until resolution to Grade 1 or less [see Dosage and Administration (2.1)].

Monitor all patients receiving temozolomide for the development of lymphopenia and PCP.

5.4 Secondary Malignancies The incidence of secondary malignancies is increased in patients treated with temozolomide -containing regimens. Cases of myelodysplastic syndrome and secondary malignancies, including myeloid leukemia, have been observed following temozolomide administration.

5.5 Embryo-Fetal Toxicity

Based on findings from animal studies and its mechanism of action, temozolomide can cause fetal harm when administered to a pregnant woman. Adverse developmental outcomes have been reported in both pregnant patients and pregnant partners of male patients. Oral administration of temozolomide to rats and rabbits during the period of organogenesis resulted in embryolethality and polymalformations at doses less than the maximum human dose based on body surface area.

Advise pregnant women and females of reproductive potential of the potential risk to a fetus. Advise females of reproductive potential to use effective contraception during treatment with temozolomide and for 6 months after the last dose. Because of potential risk of genotoxic effects on sperm, advise male patients with female partners of reproductive potential to use condoms during treatment with temozolomide and for 3 months after the last dose. Advise male patients not to donate semen during treatment with temozolomide and for 3 months after the last dose *[see Use in Specific Populations (8.1, Complex Complex* 8.3)1.

5.6 Exposure to Opened Capsules Advise patients not to open, chew or dissolve the contents of the temozolomide capsules. Swallow capsules whole with a glass of water. If a capsule becomes damaged, avoid contact of the powder contents with skin or mucous membranes. In case of powder contact, wash affected area with water immediately [see Dosage and Administration (2.4)]. If temozolomide capsules must be opened or the contents must be dissolved, this should be done by a professional trained in safe handling of hazardous drugs using appropriate equipment and safety procedures.

6 ADVERSE REACTIONS

- The following clinically significant adverse reactions are described elsewhere in the labeling: Myelosuppression [see Warnings and Precautions (5.1)]

- Hepatotoxicity [see Warnings and Precautions (5.2)]
 Pneumocystis Pneumonia [see Warnings and Precautions (5.3)]
 Secondary Malignancies [see Warnings and Precautions (5.4)]

6.1 Clinical Trials Experience Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in practice.

Newly Diagnosed Glioblastoma

The safety of temozolomide was evaluated in study MK-7365-051 [see Clinical Studies (14,1)]. Severe or life-threatening adverse reactions occurred in 49% of patients treated with temozolomide; the most common were fatigue (13%), convulsions (6%), headache (5%), and thrombocytopenia (5%). The most common adverse reactions (≥20%) in patients treated with temozolomide were alopecia, fatigue, nausea, anorexia, headache, constipation, and vomiting. Table 3 summarizes the adverse reactions in MK-7365-051.

TABLE 3: Adverse Reactions (\geq 10%) in Patients with Newly Diagnosed Glioblastoma

Adverse Reactions	Concomitant Use Phase				Maintenance Use Phase	
	Radiation Therapy and Temozolomide N=288*		Radiation Therapy Alone N=285		Temozolomide N=224	
	All Grades (%)	Grade ≥3 (%)	All Grades (%)	Grades ≥3 (%)	All Grades (%)	Grade ≥3 (%)
Skin and Subcutaneous	s Tissue					
Alopecia	69	0	63	0	55	0
Rash	19	1	15	0	13	1
General						
Fatigue	54	7	49	5	61	9
Anorexia	19	1	9	<1	27	1
Headache	19	2	17	4	23	4
Gastrointestinal System	n					
Nausea	36	1	16	<1	49	1
Vomiting	20	<1	6	<1	29	2
Constipation	18	1	6	0	22	0
Diarrhea	6	0	3	0	10	1
Central and Peripheral Nervous System						
Convulsions	6	3	7	3	11	3

* One patient who was randomized to radiation therapy-only arm received radiation therapy and temozolomide.

NOS = not otherwise specified

Note: Grade 5 (fatal) adverse reactions are included in the Grade ≥3 colum Clinically relevant adverse reactions in <10% of patients are presented below: Central & Peripheral Nervous System: memory impairment, confusion Eye: vision blurred Gastrointestinal System: stomatitis, abdominal pain General: weakness, dizziness Immune System: allergic reaction

2.2 Recommended Dosage and Dosage Modifications for Newly Diagnosed Glioblastoma

Administer temozolomide capsules etitier orally or intravenously once daily for 42 to 49 consecutive days during the concomitant use phase with focal radiotherapy, and then once daily on Days 1 to 5 of each 28-day cycle for 6 cycles during the maintenance use phase.

For concomitant radiotherapy, obtain a complete blood count prior to initiation of treatment and weekly

For the 28-day treatment cycles, obtain a complete blood count prior to treatment on Day 1 and on Day 22 of each cycle. Perform complete blood counts weekly until recovery if the ANC falls below 1.5×10^{9} /L and the platelet count falls below 100×10^{9} /L.

For concomitant use with focal radiotherapy, obtain a complete blood count weekly and as clinically

8.5 Geriatric Use 8.6 Renal Impairment 8.7 Hepatic Impairment

8.3 Females and Males of Reproductive Potential8.4 Pediatric Use

- 10 OVERDOSAGE
- 11 DESCRIPTION
- 12 CLINICAL PHARMACOLOGY
 - Mechanism of Actio 12.1
 - Pharmacodynamics
 - 12.2
- 12.3 Pharmacokinetics
- 13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

FOLL FRESCRIDING INFORMATION	Platelet Count	Withhold temozolomide capsules if	Discontinue temozolomide capsules
1 INDICATIONS AND USAGE		platelet less than 50 x 10 ⁹ /L.	if unable to tolerate a dose of
1.1 Newly Diagnosed Glioblastoma			100 mg/m ² per day.
Temozolomide capsules are indicated for the treatment of adults with newly diagnosed glioblastoma,		When platelet count is above 100	
concomitantly with radiotherapy and then as maintenance treatment.		x 10 ⁹ /L, resume temozolomide	
1.2 Ananlastic Astrocytoma		capsules at reduced dose for the	
Temozolomide capsules are indicated for the:		next cycle.	
 adjuvant treatment of adults with newly diagnosed anaplastic astrocytoma; 	Nonhematological	Withhold temozolomide capsules	Discontinue temozolomide capsules
 treatment of adults with refractory anaplastic astrocytoma. 	Adverse Reactions	if Grade 3 adverse reaction occurs.	if recurrent Grade 3 adverse reaction
2 DOSAGE AND ADMINISTRATION	(except for alopecia,		occurs after dose reduction, if Grade 4
2.1 Monitoring to Inform Dosage and Administration	nausea, vomiting)	When resolved to Grade 1 or less,	adverse reaction occurs, or if unable to
Prior to dosing withhold temozolomide cansules until patients have an absolute neutronhil count (ANC)		resume temozolomide capsules at	tolerate a dose of 100 mg/m ² per day.
of $1.5 \times 10^{9/1}$ or oreater and a platelet count of $100 \times 10^{9/1}$ or oreater		reduced dose for the next cycle.	

2.3 Recommended Dosage and Dosage Modifications for Anaplastic Astrocytom

Adjuvant Treatment of Newly Diagnosed Anaplastic Astrocytoma

Beginning 4 weeks after the end of radiotherapy, administer temozolomide capsules orally in a single dose on days 1 to 5 of a 28-day cycle for 12 cycles. The recommended dosage of temozolomide capsules

 Cycle 1: 150 mg/m² per day on days 1 to 5.
 Cycles 2 to 12: 200 mg/m² per day on days 1 to 5 if patient experienced no or minimal toxicity in Cycle 1. If the dose was not escalated at the onset of Cycle 2, do not increase the dose during Cycles

The recommended complete blood count testing and dosage modifications due to adverse reactions during adjuvant treatment are provided above and in Table 2 [see Dosage and Administration (2.2)].

- 13 NONCLINICAL TOXICOLOGY
 - 13.2 Animal Toxicology and/or Pharmacology

14 CLINICAL STUDIES

- 14.1 Newly Diagnosed Glioblastoma
- 14.2 Anaplastic Astrocytoma
- 15 REFERENCES

16 HOW SUPPLIED/STORAGE AND HANDLING

17 PATIENT COUNSELING INFORMATION

*Sections or subsections omitted from the full prescribing information are not listed

nonia (PCP) prophylaxis d *mocystis* pn ring the in patients who develop lymphopenia until resolution to Grade 1 or less [see Warnings and Precautions (5.3)1.

during treatment.

Concomitant Use Phase: The recommended dosage of temozolomide capsules is 75 mg/m² either orally or intravenously once daily for 42 to 49 days in combination with focal radiotherapy. Focal radiotherapy includes the tumor bed

or resection site with a 2 to 3 cm margin

HIGHLIGHTS OF PRESCRIBING INFORMATION

Indications and Usage (1.2) Dosage and Administration (2.1, 2.2, 2.3, 2.4)

Warnings and Precautions (5.1, 5.2, 5.4, 5.5, 5.6)

TEMOZOLOMIDE capsules, for oral use

Newly Diagnosed Glioblastoma

Initial U.S. Approval: 1999

Contraindications (4)

(1.1)

0

day cycle. (2.2)

1 INDICATIONS AND USAGE

1.2 Anaplastic Astrocytoma

2 DOSAGE AND ADMINISTRATION

These highlights do not include all the information needed to use TEMOZOLOMIDE CAPSULES safely and effectively. See full prescribing information for TEMOZOLOMIDE CAPSULES.

-RECENT MAJOR CHANGES

--INDICATIONS AND USAGE-Temozolomide capsule is an alkylating drug indicated for the treatment of adults with: • Newly diagnosed glioblastoma concomitantly with radiotherapy and then as maintenance treatment

-----DOSAGE AND ADMINISTRATION --

75 mg/m² once daily for 42 to 49 days concomitant with focal radiotherapy followed by initial maintenance dose of 150 mg/m² once daily for Days 1 to 5 of each 28-day cycle for 6 cycles. May increase maintenance dose to 200 mg/m² for Cycles 2 to 6 based on toxicity. (2.1)

Adjuvant Treatment of Newly Diagnosed Anaplastic Astrocytoma: Beginning 4 weeks after the end of radiotherapy, administer temozolomide capsules orally in a single dose on days 1 to 5 of a 28-day cycle for 12 cycles. The recommended dosage for Cycle 1 is 150 mg/m² per day and for Cycles 2 to

12 is 200 mg/m² if patient experienced no or minimal toxicity in Cycle 1. (2.2) <u>Refractory Anaplastic Astrocytoma:</u> Initial dose of 150 mg/m² once daily on Days 1 to 5 of each 28-

--DOSAGE FORMS AND STRENGTHS

--CONTRAINDICATIONS-History of serious hypersensitivity to temozolomide or any other ingredients in temozolomide capsules and dacarbazine. (4)

2.2 Recommended Dosage and Dosage Modifications for Newly Diagnosed Glioblastoma

2.3 Recommended Dosage and Dosage Modifications for Anaplastic Astrocytoma

Provide *Pneumocystis* pneumonia (PCP) prophylaxis during concomitant phase and continue in patients who develop lymphopenia until resolution to Grade 1 or less. (2.1)

Anaplastic astrocytoma. (1.2) o Adjuvant treatment of adults with newly diagnosed anaplastic astrocytoma. (1.2)

o Treatment of adults with refractory anaplastic astrocytoma. (1.2)

• Capsules: 5 mg, 20 mg, 100 mg, 140 mg, 180 mg, and 250 mg. (3)

FULL PRESCRIBING INFORMATION: CONTENTS*

2.1 Monitoring to Inform Dosage and Administration

1.1 Newly Diagnosed Glioblastoma

2.4 Preparation and Administration

3 DOSAGE FORMS AND STRENGTHS

5 WARNINGS AND PRECAUTIONS

5.3 Pneumocystis Pneumonia

5.4 Secondary Malignancies

5.6 Exposure to Opened Capsule

6.1 Clinical Trials Experience 6.2 Postmarketing Experience 8 USE IN SPECIFIC POPULATIONS 8.1 Pregnancy 8.2 Lactation

FULL PRESCRIBING INFORMATION INDICATIONS AND USAGE 1.1 Newly Diagnosed Glioblastoma

5.5 Embryo-Fetal Toxicity

5.1 Myelosuppression

5.2 Hepatotoxicity

6 ADVERSE REACTIONS

4 CONTRAINDICATIONS

Other administration schedules have been used.

Obtain a complete blood count weekly. The recommended dosage modifications due to adverse reactions during concomitant use phase are provided in **Table 1**.

TABLE 1: Dosage Modifications Due to Adverse Reactions During Concomitant Use Phase

Adverse Reaction	Interruption	Discontinuation
Absolute Neutrophil Count	Withhold temozolomide capsules if ANC is greater than or equal to 0.5 x 10^{9} /L and less than 1.5 x 10^{9} /L.	Discontinue temozolomide capsules if ANC is less than $0.5 \times 10^9/L$.
	Resume temozolomide capsules at the same dose when ANC is greater than or equal to 1.5×10^{9} /L.	
Platelet Count	Withhold temozolomide capsules if platelet count is greater than or equal to 10×10^{9} /L and less than 100×10^{9} /L.	Discontinue temozolomide capsules if platelet count is less than 10 x $10^9/L$.
	Resume temozolomide capsules at the same dose when platelet count is greater than or equal to $100 \times 10^9/L$.	
Non-hematological Adverse Reaction (except for alopecia, nausea, vomiting)	Withhold temozolomide capsules if Grade 2 adverse reaction occurs. Resume temozolomide capsules at the same dose when resolution to	Discontinue temozolomide capsules if Grade 3 or 4 adverse reaction occurs.
Non-hematological Adverse Reaction (except for alopecia, nausea, vomiting)	To 10 × 10% and less than 100 × 10% . Resume termozolomide capsules at the same dose when platelet count is greater than or equal to 100×10^{9} /L. Withhold temozolomide capsules if Grade 2 adverse reaction occurs. Resume termozolomide capsules at the same dose when resolution to Grade 10 ress.	Discontinue temozolomide ca if Grade 3 or 4 adverse n occurs.

Single Agent Maintenance Use Phase:

Beginning 4 weeks after concomitant use phase completion, administer temozolomide capsules either orally or intravenously once daily on Days 1 to 5 of each 28-day cycle for 6 cycles. The recommended dosage of temozolomide capsules in the maintenance use phase is

• Cycle 1: 150 mg/m² per day on days 1 to 5.

• Cycles 2 to 6: May increase to 200 mg/m² per day on days 1 to 5 before starting Cycle 2 if no dosage interruptions or discontinuations are required (Table 1). If the dose is not escalated at the onset of Cycle 2, **do not** increase the dose for Cycles 3 to 6.

Obtain a complete blood count on Day 22 and then weekly until the ANC is above 1.5 x $10^9/L$ and the platelet count is above 100 x $10^9/L$. Do not start the next cycle until the ANC and platelet count exceed these levels.

The recommended dosage modifications due to adverse reactions during the maintenance use phase are provided in Table 2

If temozolomide capsule is withheld, reduce the dose for the next cycle by 50 mg/m² per day. Permanently discontinue temozolomide capsules in patients who are unable to tolerate a dose of 100 mo/m² per day.

TABLE 2: Dosage Modifications Due to Adverse Reactions During Maintenance and Adjuvant

Adverse Reactions	Interruption and Dose Reduction	Discontinuation
Absolute Neutrophil Count	Withhold temozolomide capsules if ANC less than 1 x $10^{9}/L$.	Discontinue temozolomide capsules if unable to tolerate a dose of 100 mg/m ² per day.
	When ANC is above $1.5 \times 10^{9}/L$, resume temozolomide capsules at reduced dose for the next cycle.	

Refractory Anaplastic Astrocytoma

The recommended initial dosage of temozolomide capsules is 150 $\mbox{mg/m}^2$ once daily on Days 1 to 5 of each 28-day cycle. Increase the temozolomide capsules dose to 200 mg/m² per day if the following conditions are met at the nadir and on Day 1 of the next cycle:

ANC is greater than or equal to 1.5 x 10⁹/L, and

Platelet count is greater than or equal to 100 x 10⁹/L

Continue temozolomide capsules until disease progression or unacceptable toxicity. Obtain a complete blood count on Day 22 and then weekly until the ANC is above 1.5 x 109/L and the platelet count is above 100 x 10⁹/L. Do not start the next cycle until the ANC and platelet count exceed these levels

If the ANC is less than 1 x 10⁹/L or the platelet count is less than 50 x 10⁹/L during any cycle, reduce the temozolomide capsules dose for the next cycle by 50 mg/m² per day. Permanently discontinue temozolomide capsules in patients who are unable to tolerate a dose of 100 mg/m² per day.

2.4 Preparation and Administration

Temozolomide capsules is a hazardous drug. Follow applicable special handling and disposal procedures.¹ Take temozolomide capsules at the same time each day. Administer temozolomide capsules consistently with respect to food (fasting vs. nonfasting) [see Clinical Pharmacology (12.3)]. To reduce nausea and vomiting, take temozolomide capsules on an empty stomach or at bedtime and consider antiemetic therapy prior to and following temozolomide capsules administration

Swallow temozolomide capsules whole with water. Advise patients not to open, chew, or dissolve the contents of the capsules [see Warnings and Precautions (5.6)]. If capsules are accidentally opened or damaged, take precautions to avoid inhalation or contact with the

skin or mucous membranes. In case of powder contact, wash the affected area with water immed 3 DOSAGE FORMS AND STRENGTHS

Temozolomide capsules, USP are available in 5 mg, 20 mg, 100 mg, 140 mg, 180 mg, and 250 mg strengths. The capsules contain a white capsule body with a color cap, and the colors vary based on the dosage strength.

5 mg: Opaque green cap and opaque white body, hard gelatin capsules imprinted with '13' on cap and 'H' on body, filled with off-white to pink or tan color granular powder. 20 mg: Opaque yellow cap and opaque white body, hard gelatin capsules imprinted with '14' on cap and

'H' on body, filled with off-white to pink or tan color granular powder 100 mg: Opaque pink cap and opaque white body, hard gelatin capsules imprinted with '15' on cap and

'H' on body, filled with off-white to pink or tan color granular powder 140 mg: Opaque blue cap and opaque white body, hard gelatin capsules imprinted with '16' on cap and

'H' on body, filled with off-white to pink or tan color granular powder 180 mg: Opaque orange cap and opaque white body, hard gelatin capsules imprinted with '17' on cap and

'H' on body, filled with off-white to pink or tan color granular powder.

250 mg; Opaque white cap and opaque white body, hard gelatin capsules imprinted with '18' on cap and 'H' on body, filled with off-white to pink or tan color granular powder

4 CONTRAINDICATIONS

Temozolomide is contraindicated in patients with a history of serious hypersensitivity reactions to: · temozolomide or any other ingredients in temozolomide capsules; and

dacarbazine, since both temozolomide and dacarbazine are metabolized to the same active metabolite 5-(3-methyltriazen-1-yl)-imidazole-4-carboxamide.

Reactions to temozolomide have included anaphylaxis [see Adverse Reactions (6.2)].

5 WARNINGS AND PRECAUTIONS

5.1 Myelosuppression Myelosuppression, including pancytopenia, leukopenia, and anemia, some with fatal outcomes, have

occurred with temozolomide [see Adverse Reactions (6.1, 6.2)].

In MK-7365-006, myelosuppression usually occurred during the first few cycles of therapy and was generally not cumulative. The median nadirs occurred at 26 days for platelets (range: 21 to 40 days) and 28 days for neutrophils (range: 1 to 44 days). Approximately 10% of patients required hospitalization, blood transfusion, or discontinuation of therapy due to myelosuppression. Geriatric patients and women have been shown in clinical trials to have a higher risk of developing myelosuppression

Obtain a complete blood count and monitor ANC and platelet counts before initiation of treatment and obtain a complete blood count prior to initiation of treatment, weekly during treatment, and as clinically indicated [see Dosage and Administration (2.1, 2.2, 2.3)].

Platelet Rie Psvchiatric: insomnia

Respiratory System: coughing, dyspnea

Musculoskeletal System: arthralgia

Special Senses Other: taste perversion Skin & Subcutaneous Tissue: dry skin, pruritus, erythema

Injury: radiation injury not otherwise specified

When laboratory abnormalities and adverse reactions were combined, Grade 3 or Grade 4 neutrophil abnormalities including neutropenic reactions were observed in 8% of patients, and Grade 3 or Grade 4 platelet abnormalities including thrombocytopenic reactions were observed in 14% of patients.

Newly Diagnosed Anaplastic Astrocytoma

The safety of temozolomide for the adjuvant treatment of adults with newly diagnosed anaplastic astrocytoma was derived from published literature (see Clinical Studies (14.2)). The safety of temozolomide for the adjuvant treatment of patients with newly diagnosed anaplastic astrocytoma was consistent with the known safety profile of temozolomide

Refractory Anaplastic Astrocytoma

The safety of temozolomide was evaluated in study MK-7365-006 [see Clinical Studies (14.2)]. The most common adverse reactions (≥20%) were nausea, vomiting, headache, fatigue, constipation, and convulsions

Tables 4 and 5 summarize the adverse reactions and hematological laboratory abnormalities in MK-

TABLE 4: Adverse Reactions (≥10%) in Patients with Refractory Anaplastic Astrocytoma

Adverse Reactions	Temozolomide N=158		
	All Reactions (%)	Grades 3 to 4 (%)	
Gastrointestinal System			
Nausea	53	10	
Vomiting	42	6	
Constipation	33	1	
Diarrhea	16	2	
General			
Headache	41	6	
Fatigue	34	4	
Asthenia	13	6	
Fever	13	2	
Central and Peripheral Nervous	System		
Convulsions	23	5	
Hemiparesis	18	6	
Dizziness	12	1	
Coordination abnormal	11	1	
Amnesia	10	4	
Insomnia	10	0	
Cardiovascular			
Edema peripheral	11	1	
Resistance Mechanism			
Infection viral	11	0	

Clinically relevant adverse reactions in <10% of patients are presented below:

Central and Peripheral Nervous System: paresthesia, somnolence, paresis, urinary incontinence, ataxia, dysphasia, convulsions local, gait abnormal, confusion

Endocrine: adrenal hypercorticism

		<-
	Patient Information Temozolomide Capsules, USP (tem" oh zoľ oh mide)	
Vha Tem brair	if are temozolomide capsules? ozolomide capsules are a prescription medicine used to treat adults with certain n cancer tumors.	
≝ 6	not known it remozoomide capsues is sare and errective in children. int take temozolomide capsules is vare have had an allergic reaction to temozolomide or any of the other ingredients in themozolomide capsules. Spent the end of this leaflet for a list of ingredients in temozolomide capsules. Symptoms of an allergic reaction, with the morsolomide capsules may include: a read forty rash, or a severe allergic reaction, with you are breathing, welling of the face, throad, or forgue, or severe skin reaction. If you are have had an allergic reaction to theorethy tack and to starting and the face, throad, or thouge or severe skin reaction. If you are have had a nallergic reaction to theorethy in a contraction and the reaction.	
Befo	the taking or receiving tempological comparison or the second of the second second of the second sec	
•	are proving the properties of the program. Temozolomide capsules can harm your unborn baby and cause birth defects. Females who can become pregnant: o You should not become pregnant during treatment with temozolomide	
	capsules. o You should use an effective form of birth control (contraception) during treatment and for 6 months after your last dose of temocolomide capsules. o Your healthcare provider should do a pregnant/v test to make sure that you are	
	not pregnant before you start taking temozolomide capsules. O Tell your healthcare provider right away if you become pregnant or think you may be pregnant during treatment with temozolomide capsules. Mates with a female mariner who is menuant or who can become preunant:	
	O Use a condom for birth control (contraception) during treatment and for 3 months after taking your last dose of temozolomide capsules. Do not contract estimate the during treatment and for 3 months after your last dose of temozolomide capsules.	
•	terinozolonimue capsules. are breastfieeding or plan to breastfieed. It is not known if fermozolomide passes into your breast mith. Do not breastfied during treatment and for 1 week after your last dose of themozolomide capsules.	
Tell presi	your doctor about all the medicines you take, including prescription and non- group medicines, vitamins, and hendal supplements.	
Knov and	w the medicines you take. Keep a list of them and show it to your healthcare provider pharmacist when you get a new medicine.	
мон.	should I take temozolomide capsules? you may take temozolomide capsules by mouth as a capsule. If your healthcare provider prescribes temozolomide capsules for you, take the	
Ther depe	capsules exactly as prescribed. e are 2 common dosing schedules for taking or receiving temozolomide capsules anding on the type of brain cancer tumor that you have.	
•	People with certain brain cancer tumors take or receive tempcoloninde capsules: the time seaf bay for 42 to 49 days in a row, along with receiving radiation terment. This is 1 cycle of treatment. After this, your healthcare provider	
	may prescribe 6 more cycles of Temozolomide capsules as "maintenance" treatment. For each of these cycles, you take or receive Temozolomide capsules 1 time each day for 5 days in a row and then you stop taking if for the	
•	next 23 days. This is a 28-day maintenance treatment cycle. People with certain other brain cancer tumors take or receive temozolomide capsules:	
	 0 1 time each day for 5 days in a row only, and then stop taking it for the next 23 days. This is 1 cycle of treatment (28 days). 0 Your healthcare provider will watch your progress on temozolomide capsules 	
•	and decide how long you should take it. If your healthcare provider prescribes a treatment regimen that is different from the information in this leafet, make sure you follow the instructions over to you by	
•	your health firm are browder. The start of the provident of the provident of the provident of the provident may Your healthcare provident may change your dose of tempozolomide capsules, or tell vou to stoh tempanently if you	
•	have certain side effects. Your healthcare provider will decide how many treatment cycles of temozolomide careaties that vour will receive demention on how vour resonnd to and histate	
• •	Trademond runs you mu roomay or nor you nor you nor you no you	
	reincontinue depende volumit a winne versuer output a volum dep and une colors vary based on the dosage strength. Your healthcare provider may prescribe more than 1 strength of tennozolomide capsules for you, so it is important that you understand how to take your medicine the right way. Be sure that you understand	
•	exactly how many capsules you need to have on each day of your treatment, and what strengths to take. This may be different whenever you start a new cycle. Do not take more tempozlomide capsules than prescribed.	
•	Talk to your healthcare provider or pharmacist before taking your dose if you are not sure how much temozolomide capsules to take. This will help to prevent taking too much temozolomide capsules and decrease your chances of getting serious side	
•	effects. Take each day's dose of temozolomide capsules at one time, with a full glass of water	
••	Take temozolomide capsules at the same time each day. Take temozolomide capsules the same way each time, either with food or without food	
•	book Swallow temozolomide capsules whole with water. Do not open, chew, or dissolve the contents of the capsules.	
•	If temporation capacities are accidentally opened or damaged, be careful not to breathe in (inhale) the powder from the capaciles or get the powder on your skin or microirs membranes (for example, in your noise or month) If contrart with any of	
•	these areas happens, yes than area with water right away. These areas happens, wash than area with water right away. To help reduce matsea and vomiting, try to take temozolomide capsules on an emDk stomach or at bedtime. Your healthcare provider may resorbe medicine	
	to help prevent or treat nauses, or other medicines to reduce side effects with temozolomide capsules.	
	See your neatmeare provider regularly to check your progress. Your healthcare provider will check you for side effects. If you take more tempcolomide capsules than prescribed, call your healthcare	
	provider or get emergency medical help right away.	X

Artwork information			
Customer	Camber	Market	USA
Dimensions (mm)	Size: 280 x 540 mm	Non Printing Colors	Die cut
Pharma Code No.	rma Code No. Pharmacode: Front-632 & Back-633		
Printing Colours (01) Black			
Others: Note: Position, Height of the pharma code are tentative, V: 00 it can be changed based on folding size.			V: 00





Gastrointestinal System: abdominal pain, anorexia General: back pain

Metabolic: weight increase

Musculoskeletal System: myalgia

Psychiatric: anxiety, depression

Reproductive Disorders: breast pain female

Respiratory System: upper respiratory tract infection, pharyngitis, sinusitis, coughing *Vinary System:* urinary tract infection, micturition increased frequency

Vision: diplopia, vision abnormal*

* This term includes blurred vision; visual deficit; vision changes; and vision troubles.

TABLE 5: Grade 3 to 4 Hematologic Laboratory Abnormalities That Worsened from Baseline in Patients with Refractory Anaplastic Astrocytoma

	Temozolomide ^{*,†} (%)
Decreased lymphocytes	55
Decreased platelets	19
Decreased neutrophils	14
Decreased leukocytes	11
Decreased hemoglobin	4

Change from Grade 0 to 2 at baseline to Grade 3 or 4 during treatment. [†] Denominator range= 142, 158

Hematological Toxicities for Advanced Gliomas In clinical trial experience with 110 to 111 females and 169 to 174 males (depending on measurements), females experienced higher rates of Grade 4 neutropenia (ANC $0.5 \times 10^9/L$) and thrombocytopenia (<20 $\times 10^9/L$) than males in the first cycle of therapy (12% vs. 5% and 9% vs. 3%, respectively).

In the entire safety database for which hematologic data exist (N=932), 7% (4/61) and 10% (6/63) of patients >70 years experienced Grade 4 neutropenia or thrombocytopenia in the first cycle, respectively. For patients ≤70 years, 7% (62/871) and 6% (48/879) experienced Grade 4 neutropenia or thrombocytopenia in the first cycle, respectively. Pancytopenia, leukopenia, and anemia also occurred

6.2 Postmarketing Experience

The following adverse reactions have been identified during post-approval use of temozolomide. Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to the drug exposure.

Dermatologic: Toxic epidermal necrolysis and Stevens-Johnson syndrome.

Immune System: Hypersensitivity reactions, including anaphylaxis. Erythema multiforme, which resolved after discontinuation of temozolomide and, in some cases, recurred upon rechallenge.

Hematopoietic: Prolonged pancytopenia, which may result in aplastic anemia and fatal outcomes Hepatobiliary: Fatal and severe hepatotoxicity, elevation of liver enzymes, hyperbilirubinemia, cholestasis,

Infections: Serious opportunistic infections, including some cases with fatal outcomes, with bacterial,

viral (primary and reactivated), fungal, and protozoan organisms Pulmonary: Interstitial pneumonitis, pneumonitis, alveolitis, and pulmonary fibrosis.

Endocrine: Diabetes insipidus.

8 USE IN SPECIFIC POPULATIONS

8.1 Pregnancy

Risk Summarv

Based on findings from animal studies and its mechanism of action [see Clinical Pharmacology (12.1)], temozolomide can cause fetal harm when administered to a pregnant woman. Available postmarketing reports describe cases of spontaneous abortions and congenital malformations, including polymaticity of the contract of a polymatrice and the state of a polymaticity and the state of t developmental outcomes to those observed in animal studies. Administration of temozolomide to rats and rabits during the period of organogenesis caused numerous external, internal, and skeletal malformations at doses less than the maximum human dose based on body surface area (see Data). Advise pregnant women of the potential risk to a fetus.

In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2% to 4% and 15% to 20%, respectively.

Data Animal Data

Five consecutive days of oral administration of temozolomide at doses of 75 and 150 $\rm mg/m^2$ (0.38 and 0.75 times the human dose of 200 mg/m²) in rats and rabbits, respectively, during the period of organogenesis (Gestation Days 8-12) caused numerous malformations of the external and internal organs and skeleton in both species. In rabbits, temozolomide at the 150 mg/m² dose (0.75 times the human dose of 200 mg/m²) caused embryolethality as indicated by increased resorptions

8.2 Lactation

re are no data on the presence of temozolomide or its metabolites in human milk, the effects on a breastfed child, or the effects on milk production. Because of the potential for serious adverse reactions, including myelosuppression from temozolomide in the breastfed children, advise women not to breastfeed during treatment with temozolomide and for 1 week after the last dose.

8.3 Females and Males of Reproductive Potential

Temozolomide can cause fetal harm when administered to a pregnant woman *Isee Use in Specific* Populations (8.1)].

Pregnancy Testing

Verify pregnancy status in females of reproductive potential prior to initiating temozolomide [see Use in Specific Populations (8.1)].

Contraception

Females

Advise females of reproductive potential to use effective contraception during treatment with temozolomide and for 6 months after the last dose. Males

Because of the potential for embryofetal toxicity and genotoxic effects on sperm cells, advise male patients with pregnant partners or female partners of reproductive potential to use condoms during treatment with temozolomide and for 3 months after the last dose [see Use in Specific Populations (8.1), Nonclinical Toxicology (13.1)].

Advise male patients not to donate semen during treatment with temozolomide and for 3 months after the last dose

Infertility

Temozolomide may impair male fertility *[see Nonclinical Toxicology (13.1)]*. Limited data from male patients show changes in sperm parameters during treatment with temozolomide; however, no information is available on the duration or reversibility of these changes. The material is a white to light pink or light tan powder with a molecular formula of $C_{e}H_{e}N_{e}O_{2}$ and a molecular weight of 194.15. The molecule is stable at acidic pH (<5) and labile at pH temozolomide capsules can be administered orally. The prodrug, temozolomide, is rapidly hydrolyzed to the active 5-(3-methyltriazen-1-yl) imidazole-4-carboxamide (MTIC) at neutral and alkaline pH values, with hydrolysis taking place even faster at alkaline pH

Temozolomide capsules, USP for oral use contains either 5 mg, 20 mg, 100 mg, 140 mg, 180 mg, or 250 mg of temozolomide, USP.

The inactive ingredients are anhydrous lactose, colloidal silica, sodium starch glycolate, stearic acid, tartaric acid

The body of the capsules is made of gelatin and is opaque white. The cap is also made of gelatin, and the colors vary based on the dosage strength. The capsule body and cap are imprinted with pharmaceutical branding ink, which contains black iron oxide, dehydrated alcohol, isopropyl alcohol, potassium hydroxide, propylene glycol, shellac, and strong ammonia solution

Temazolomide Capsules USP, 5 mg: The opaque green cap contains FD&C Blue #2, gelatin, iron oxide yellow, sodium lauryl sulfate, and titanium dioxide.

Temazolomide Capsules USP, 20 mg: The opaque yellow cap contains gelatin, iron oxide yellow, sodium lauryl sulfate, and titanium dioxide

Temazolomide Capsule USP, 100 mg: The opaque pink cap contains gelatin, iron oxide red, sodium lauryl sulfate, and titanium dioxide

Temazolomide Capsules, USP, 140 mg: The opaque blue cap contains FD&C Blue #2, gelatin, sodium

laurvl sulfate, and titanium dioxide. Temazolomide Capsules USP, 180 mg: The opaque orange cap contains gelatin, iron oxide red, sodium lauryl sulfate, and titanium dioxide

Temazolomide Capsules USP, 250 mg: The opaque white cap contains gelatin, sodium lauryl sulfate, and titanium dioxide.

12 CLINICAL PHARMACOLOGY

12.1 Mechanism of Action

Temozolomide is not directly active but undergoes rapid nonenzymatic conversion at physiologic pH to the reactive compound 5-(3-methyltriazen-1-yl)-imidazole-4-carboxamide (MTIC). The cytotoxicity of MTIC is thought to be primarily due to DNA alkylation, mainly at the 0^{6} and N^{7} positions of guanine, which causes DNA double strand breaks and results in programmed cell death.

12.2 Pharmacodynamics

Temozolomide exposure-response relationships and the time course of pharmacodynamic response are unknowr

12.3 Pharmacokinetics

Following a single oral dose of 150 mg/m², the mean C_{max} is 7.5 mcg/mL for temozolomide and 282 ng/mL for MTIC. The mean AUC is 23.4 mcg-hr/mL for temozolomide and 864 ng-hr/mL for MTIC.

Following a single 90-minute intravenous infusion of 150 mg/m², the mean C_{max} is 7.3 mcg/mL for temozolomide and 276 ng/mL for MTIC. The mean AUC is 24.6 mcg-hr/mL for temozolomide and 891 ng.hr/mL for MTIC

Temozolomide exhibits linear kinetics over the therapeutic dosing range of 75 mg/m²/day to 250 mg/m²/day.

- Absorption
- The median T_{max} is 1 hour.

Effect of Food

The mean temozolomide Cmax and AUC decreased by 32% and 9%, respectively, and median Tmar increased by 2-fold (from 1 to 2.25 hours) when temozolomide capsules were administered after modified high-fat breakfast (587 calories comprised of 1 fried egg, 2 strips of bacon, 2 slices of toast, 2 pats of butter, and 8 oz whole milk).

Distribution

Temozolomide has a mean (CV%) apparent volume of distribution of 0.4 L/kg (13%). The mean percent bound of drug-related total radioactivity is 15%.

Elimination

Clearance of temozolomide is approximately 5.5 L/hr/m² and the mean elimination half-life is 1.8 hours. Metabolism

Temozolomide is spontaneously hydrolyzed at physiologic pH to the active species. MTIC and to mozolomide acid metabolite. MTIC is further hydrolyzed to 5-amino-imidazole-4-carboxamide (AIC), which is known to be an intermediate in purine and nucleic acid biosynthesis, and to methylhydrazine, which is believed to be the active alkylating species. Cytochrome P450 enzymes play a minor role in the metabolism of temozolomide and MTIC. Relative to the AUC of temozolomide, the exposure to MTIC and AIC is 2.4% and 23%, respectively.

Excretion

Approximately 38% of the administered temozolomide total radioactive dose is recovered over 7 days: 38% in urine and 0.8% in feces. The majority of the recovered radioactivity in urine is unchanged temozolomide (6%), AIC (12%), temozolomide acid metabolite (2.3%), and unidentified polar metabolite(s) (17%).

Specific Populations

No clinically significant differences in the pharmacokinetics of temozolomide were observed based on age (range: 19 to 78 years), gender, smoking status (smoker vs. non-smoker), creatinine clearance (CLcr) of 36 to 130 mL/min/m², or mild to moderate hepatic impairment (Child Pugh class A and B). The pharmacokinetics of temozolomide has not been studied in patients with CLcr <36 mL/min/m², end-stage renal disease on dialysis, or severe hepatic impairment (Child-Pugh class C).

Drug Interaction Studies

Clinical Studies and Model-Informed Approaches

No clinically significant differences in the pharmacokinetics of temozolomide or MTIC were observed when co-administered with ranitidine.

No clinically significant differences in the clearance of temozolomide or MTIC were predicted when co-administered with the following drugs: valproic acid, dexamethasone, prochlorperazine, phenytoin, carbamazepine, ondansetron, histamine-2-receptor antagonists, or phenobarbital.

13 NONCLINICAL TOXICOLOGY

13.1 Carcinogenesis. Mutagenesis. Impairment of Fertility

Temozolomide is carcinogenic in rats at doses less than the maximum recommended human dose. Femozolomide induced mammary carcinomas in both males and females at doses 0.13 to 0.63 times the maximum human dose (25 to 125 mg/m²) when administered orally on 5 consecutive days every 28 days for 6 cycles. Temozolomide also induced fibrosarcomas of the heart, eye, seminal vesicles, salivary glands abdominal cavity uterus and prostate carcinomas of the seminal vesicles schwannomas of the heart, optic nerve, and harderian gland, and adenomas of the skin, lung, pituitary, and thyroid at doses 0.5

14.2 Anaplastic Astrocytoma

Newly Diagnosed Anaplastic Astrocytoma

The efficacy of temozolomide for the adjuvant treatment of newly diagnosed anaplastic astrocytoma was derived from studies of temozolomide in the published literature. Temozolomide was evaluated in CATNON (NCT00626990), a randomized, open-label, multicenter trial, where the major efficacy outcome measure was overall survival.

Refractory Anaplastic Astrocytoma

The efficacy of temozolomide was evaluated in Study MK-7365-006, a single-arm, multicenter trial. Eligible patients had anaplastic astrocytoma at first relapse and a baseline Karnofsky performance status (KPS) of 70 or greater. Patients had variously periously received radiation therapy and may also have previously received a nitrosourea with or without other chemotherapy. Fifty-four patients had disease progression on prior therapy with both a nitrosourea and procarbazine and their malignancy was considered refractory to chemotherapy (refractory anaplastic astrocytoma population). Temozolomida capsules were given on Days 1 to 5 of each 28-day cycle at a starting dose of 150 mg/m²/day. If ANC was ≥1.5 × 10⁹/L and platelet count was $\geq 100 \times 10^{9}$ /L at the nadir and on Day 1 of the next cycle, the temozolomide dose was increased to 200 mg/m²/day. The major efficacy outcome measure was progression-free survival at 6 months and the additional efficacy outcome measures were overall survival and overall response rate.

In the refractory anaplastic astrocytoma population (n=54), the median age was 42 years (range: 19 to 76); 65% were male; and 72% had a KPS of >80. Sixty-three percent of patients had surgery other than a biopsy at the time of initial diagnosis. Of those patients undergoing resection, 73% underwent a subtotal resection and 27% underwent a gross total resection. Eighteen percent of patients had surgery at the time of first relapse. The median time from initial diagnosis to first relapse was 13.8 months (range: 4.2 months to 6.3 years).

In the refractory anaplastic astrocytoma population, the overall response rate (CR+PR) was 22% (12 of 54 patients) and the complete response rate was 9% (5 of 54 patients). The median duration of all responses was 50 weeks (range: 16 to 114 weeks) and the median duration of complete responses was 64 weeks (range: 52 to 114 weeks). In this population, progression-free survival at 6 months was 45% (195% Cl: 31%, 58%) and progression-free survival at 12 months was 29% (95% Cl: 16%, 42%). Median progression-free survival was 4.4 months. Overall survival at 6 months was 74% (95% Cl: 62%, 86%) and 12-month overall survival was 65% (95% CI: 52%, 78%). Median overall survival was 15.9 months 15 REFERENCES

1. "OSHA Hazardous Drugs." OSHA. http://www.osha.gov/hazardous-drugs

16 HOW SUPPLIED/STORAGE AND HANDLING

Bottles of 5 count

Myelosuppression

Hepatotoxicity

Pneumocystis Pneumonia

Precautions (5.3)]

Secondary Malignancies

Embryo-Fetal Toxicity

iring treatment with tem

Lactation

Infertility

CAMBER

(8.3), Nonclinical Toxicology (13.1)].

[see Use in Specific Populations (8.2)]

Populations (8.3), Nonclinical Toxicology (13.1)].

Warnings and Precautions (5.4)1.

Exposure to Opened Capsules

Bottles of 14 count

17 PATIENT COUNSELING INFORMATION

15°C to 30°C (59°F to 86°F) [see USP Controlled Room Temperature].

Advise the patient to read the FDA-approved patient labeling (Patient Information).

Temozolomide is a hazardous drug. Follow applicable special handling and disposal procedures.¹ Temozolomide Capsules, USP

5 mg: Opaque green cap and opaque white body, hard gelatin capsules imprinted with '13' on cap and 'H' on body, filled with off-white to pink or tan color granular powde

Bottles of 5 count	NDC 31722-411-31
Bottles of 14 count	NDC 31722-411-14
20 mg: Opaque yellow cap and opaque white body 'H' on body, filled with off-white to pink or tan colo	r, hard gelatin capsules imprinted with '14' on cap and or granular powder.

Bottles of 5 count	NDC 31722-412-31
Bottles of 14 count	NDC 31722-412-14
) mg: Opaque pink cap and opaque white body, hard	gelatin capsules imprinted with '15' on cap and

'H' on body, filled with off-white to pink or tan color granular powder. Rottles of 5 count NDC 31722-413-31

Dotties of 5 count	100 31722-413-31
Bottles of 14 count	NDC 31722-413-14
40 mg: Opaque blue cap and opaque white body, h	ard gelatin capsules imprinted with '16' on cap and
If any heads, filled with aff white to might an tage appart.	ropular pourdar

"H' on body, filled with off-white to pink or tan color granular powder. NDC 31722-414-31

Dotties of 5 count	NDC 31722-414-31
Bottles of 14 count	NDC 31722-414-14
180 mg: Opaque orange cap and opaque white body	, hard gelatin capsules imprinted with '17' on cap and
'H' on body, filled with off-white to pink or tan color	r granular powder.

Bottles of 5 count	NDC 31722-415-31
Bottles of 14 count	NDC 31722-415-14
250 mg: Opaque, white cap and opaque white body, 'H' on body, filled with off-white to pink or tan color	hard gelatin capsules imprinted with '18' on cap and granular powder.

ore temozolomide capsules, USP at 20°C to 25°C (68°F to 77°F); excursions are permitted between

Inform patients that temozolomide can cause low blood cell counts and the need for frequent monitoring

or other signs of infection *(see Warnings and Precautions (5.1))*.

Advise patients of the increased risk of hepatotoxicity and to contact their healthcare provider immediately

for signs or symptoms of hepatotoxicity. Inform patients that they will have periodic liver enzyme tests during treatment and following the last dose of temozolomide [see Warnings and Precautions (5.2)].

Advise patients of the increased risk of Pneumocystis pneumonia and to contact their healthcare

provider immediately for new or worsening pulmonary symptoms. Inform patients that prophylaxis

for Pneumocystis pneumonia may be needed [see Dosage and Administration (2.1), Warnings and

Advise patients of the increased risk of myelodysplastic syndrome and secondary malignancies [see

Advise patient to not open, chew, or dissolve the capsules. If capsules are accidentally opened or damaged, advise patients to take rigorous precautions with capsule contents to avoid inhalation or contact with the skin or mucous membranes [see Warnings and Precautions (5.6)]. In case of powder

Advise pregnant women and females of reproductive potential of the potential risk to a fetus. Advise

Advise pregnant women and remarks of reproductive potential of the potential risk to a refus. Advise females to inform their healthcare provider of a known or suspected pregnancy [see Warnings and Precations (5.5), Use in Specific Populations (8.1)].

Advise females of reproductive potential to use effective contraception during treatment with

Advise male patients with pregnant partners or female partners of reproductive potential to use condoms

Advise male patients not to donate semen during treatment with temozolomide and for 3 months after the last dose [see Use in Specific Populations (8.3), Nonclinical Toxicology (13.1)].

Advise women not to breastfeed during treatment with temozolomide and for 1 week after the last dose

Advise males of reproductive potential that temozolomide may impair fertility [see Use in Specific

ide and for 3 months after the last dose *[see] ise in Specif*

contact, wash the affected area with water immediately [see Dosage and Administration (2.4)].

temozolomide and for 6 months after the last dose [see Use in Specific Populations (8.3)].

NDC 31722-416-31

NDC 31722-416-14

8 4 Pediatric Use

Safety and effectiveness of temozolomide have not been established in pediatric patients. Safety and effectiveness of temozolomide capsules were assessed, but not established, in 2 open-label studies in pediatric patients aged 3 to 18 years. In one study, 29 patients with recurrent brain stem glioma and 34 patients with recurrent high-grade astrocytoma were enrolled. In a second study conducted by the Children's Oncology Group (COG), 122 patients were enrolled, including patients with medulloblastoma/ PNET (29), high grade astrocytoma (23), low grade astrocytoma (22), brain stem glioma (16), ependymoma (14), other CNS tumors (9), and non-CNS tumors (9). The adverse reaction profile in nediatric natients was similar to adults

8 5 Geriatric Use

In MK-7365-051, 15% of patients with newly diagnosed glioblastoma were 65 years and older. This Study did not include sufficient numbers of patients aged 55 years and older to determine differences in effectiveness from younger patients. No overall differences in safety were observed between patients \geq 65 vears and vounger patients.

The CATNON trial did not include sufficient numbers of patients aged 65 years and older to determine ferences in safety or effectiveness when compared to younger patients

In MK-7365-006, 4% of patients with refractory anaplastic astrocytoma were 70 years and older. This study did not include sufficient numbers of patients aged 70 years and older to determine differences in effectiveness from younger patients. Patients 70 years and older had a higher incidence of Grade 4 neutropenia (25%) and Grade 4 thrombocytopenia (20%) in the first cycle of therapy than patients less than 70 years of age [see Warnings and Precautions (5.1), Adverse Reactions (6.1)]

In the entire safety database for which hematologic data exist (N=932), 7% (4/61) and 10% (6/63) of patients >70 years experienced Grade 4 neutropenia or thrombocytopenia in the first cycle, respectively. For patients ≤70 years, 7% (62/871) and 6% (48/879) experienced Grade 4 neutropenia or thrombocytopenia in the first cycle, respectively. Pancytopenia, leukopenia, and anemia also occurred.

8.6 Renal Impairment

No dosage adjustment is recommended for patients with creatinine clearance (CLcr) of 36 to 130 mL/min/m² [see Clinical Pharmacology (12.3)]. The recommended dose of temozolomide has not been established for patients with severe renal impairment (CLcr <36 mL/min/m²) or for patients with end-stage renal disease on dialvsis

8.7 Hepatic Impairment

No dosage adjustment is recommended for patients with mild to moderate hepatic impairment (Child Pugh class A and B) [see Clinical Pharmacology (12.3)]. The recommended dose of temozolomide has not been established for patients with severe hepatic impairment (Child-Pugh class C).

10 OVERDOSAGE

Dose-limiting toxicity was myelosuppression and was reported with any dose but is expected to be more severe at higher doses. An overdose of 2000 mg per day for 5 days was taken by one patient and the adverse reactions reported were pancytopenia, pyrexia, multi-organ failure, and death. There are reports of patients who have taken more than 5 days of treatment (up to 64 days), with adverse reactions reported including myelosuppression, which in some cases was severe and prolonged, and infections and resulted in death. In the event of an overdose, monitor complete blood count and provide supportive measures as necessarv

11 DESCRIPTION

Temozolomide is an alkylating drug. The chemical name of temozolomide is 3,4-dihydro-3-methyl-4-oxoimidazo[5,1-d]-as-tetrazine-8-carboxamide. The structural formula of temozolomide is:

0



times the maximum daily dose. Mammary tu at the maximum recommended daily dose

Temozolomide is a mutagen and a clastogen. In a reverse bacterial mutagenesis assay (Ames assay), temozolomide increased revertant frequency in the absence and presence of metabolic activation Temozolomide was clastogenic in human lymphocytes in the presence and absence of metabolic activation.

Temozolomide impairs male fertility. Temozolomide caused syncytial cells/immature sperm formation at doses of 50 and 125 mg/m2 (0.25 and 0.63 times the human dose of 200 mg/m2) in rats and dogs, respectively, and testicular atrophy in dogs at 125 mg/m²

13.2 Animal Toxicology and/or Pharmacology

Toxicology studies in rats and dogs identified a low incidence of hemorrhage, degeneration, and necrosis of the retina at temozolomide doses equal to or greater than 125 mg/m² (0.63 times the human dose of 200 mg/m²). These changes were most commonly seen at doses where mortality was observed

14 CLINICAL STUDIES

14.1 Newly Diagnosed Glioblastoma

Number at Ris RT + TMZ RT Only

254 197 136 88

The efficacy of temozolomide was evaluated in MK-7365-051 (NCT00006353), a randomized (1:1), multicenter, open-label trial. Eligible patients were required to have newly diagnosed glioblastoma. Patients were randomized to receive either radiation therapy alone or concomitant temozolomide 75 mg/m² once daily starting the first day of radiation therapy and continuing until the last day of radiation therapy for 42 days (with a maximum of 49 days), followed by temozolomide 150 mg/m² or 200 mg/ m^2 once daily on Days 1 to 5 of each 28-day cycle, starting 4 weeks after the end of radiation therapy and continuing for 6 cycles. In both arms, focal radiation therapy was delivered as 60 Gy/30 fractions

and included radiation to the tumor bed or resection site with a 2- to 3-cm margin. PCP prophylaxis was required during the concomitant phase regardless of lymphocyte count and continued until recovery of lymphocyte count to Grade 1 or less. The major efficacy outcome measure was overall survival. A total of 573 patients were randomized, 287 to temozolomide and radiation therapy and 286 to radiation

therapy alone. At the time of disease progression, temozolomide was administered as salvage therapy in 161 patients of the 282 (57%) in the radiation therapy alone arm and 62 patients of the 277 (22%) in the emozolomide and radiation therapy arm.

The addition of concomitant and maintenance temozolomide to radiation therapy for the treatment o
patients with newly diagnosed glioblastoma showed a statistically significant improvement in overal
survival compared to radiotherapy alone (Figure 1). The hazard ratio (HR) for overall survival was 0.62
(95% CI: 0.52, 0.75) with a log-rank P<0.0001 in favor of the temozolomide arm. The median overal
survival was 14.6 months in the temozolomide arm and 12.1 months for radiation therapy alone arm.

Diagnosed Glioblastoma in MK-7365-051







Hetero Labs Limited, Unit V, Polepally, Jadcherla, Mahabubnagar - 509 301, India.

Revised: 10/2024

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\sim infection. Infection. he following signs and ver, chills, dry cough. Jlastic syndrome (MDS) in kind of leukemia, can healthcare provider will althcare provider will do blood tests regularly to check your blood cell before you start and during treatment with temozolomide capsules. The althcare provider may need to change the dose of temozolomide so rwhen you get it depending on your blood cell counts. Who are age 70 or older and women have a higher risk for developing each blood cell counts during treatment with temozolomide capsules. **The Total Start and dealth**. Your head the area of the blood blood cell counts during treatment with temozolomide capsules. **De severe and lead to dealth**. Your healthcare provider will do blood **De severe and lead to dealth**. Your thealthcare provider will do blood ide capsules. listed in a Patient on for which it was , even if they have k your pharmacist i that is written for cell cell cell cell cell who stay on temozolomide increased risk of getting PCP ability to father a more gelatin, carefully by their perature between 68°F to 77°F (20°C to stearic red effects need to blood c e can get wh hite blood cel r risk of getti t is opaque wh sage strength. does oxide dose of temozoloi For iron gelatin, iron Blue #2, #2, s can affect your bone s. Decreased white bl common with temoz ath. Some people net at their decreased bl ion that people can g es decreases white blo i increase your risk o that Keep temozolomide capsules and all medicines out of the reach of children side xide iron Blue gelatin, capsules. ved by the U.S. Food and Drug Adm or ‡ cap contains gelatin, report gelatin, condition r people, e u can ask capsules t and and contains FD&C cap contains FD&C watched Vou lles will be watched unts and this infect ave any of the fo f breath, or fever, c as myelodysplastic ntains contains affect y ern for y may gelatin f on the bothers certain Certain temozolomide ing te last cap contains What are the possible side effects of temozolomide capsules? Temozolomide capsules can cause serious side effects, inclu • Decreased blood cell counts. Temozolomide capsules can : loss of appetite capsules to other p harm them. You o t temozolomide ca psules c ounts. L are col death. treat th al bra potass ules. *umouslifs* pneumonia (PCP). PCP is an infection : immune system is weak. Temozolomide capsules d ch makes your immune system weaker and can int You t taki your constipation te capsules will d cell counts and f you have any thess of breath, s such as myelo i), including a cr nide capsules. Y males and may cap de of g based cap People who are taking steroid medicines or caseline for a longer period of time may have an infection. headache that use of s other Ir liver function before you start and about 2 to 4 weeks after y effects. capsules silica, nade alcohol, yellow c cide. orange to to What are the ingredients in temozolomide capsules? Active ingredient: temozolomide cap ood cell counts. Temozolomide cap ut to have decreased blood cell co ood cell count and platelet count it can also be severe and lead to r need to receive transfusions to sules is mad colors vary f effect /hite aque blue of green titaniu pink colloidal HETEROTM ero Labs Limited, Unit V, Polepally, Jadcherla, tabubnagar - 509 301, India. your doctor for medical advice about side at 1-800-FDA-1088. opyl diox effects opaque side \emph{r} should I store temozolomide capsules? Store temozolomide capsules at room te 25°C). . The opaque g nide ca may h about ion. The who takes temozolomide c care provider for low blood ce our healthcare provider if yr toms of PCP infection: shorthe roblems s cancers), -495-1995. for affect fertility are provider if any cap you have. It n information al mg: The c mg: The c mg: The c anium diox mg: The o anium diox mg: The nd titanium side ide Jredients: anhydrous lactos c acid. The body of the cc acid. The body of the cc acid act act and the dy and cc are imprinted w xide, dehydrated alcohol, is lac, and strong ammonia se safe about Blood pr secondary ho take te the possible aur healthcare pr mg: 1 titar mg: [.] Capsules 5 mg: T ow. sodium lauryl (has beer more information, call 1-866 about the s USE 1 les 140 -and titar es 180 -ate, and s 250 m oxide. nufactured for: mber Pharmaceuticals, Inc. cataway, NJ 08854 provider 20 100 cell cc cell cc (secc who can unts. Your healthcare p counts before you Your healthcare capsules or when People who are a decreased blood o nes | that r for i during treatment, ai capsules. Pneumocystis pneur /omiting ر der problems. L. metimes be sev s to cher effects of his Patient Information capsules in people ' you for thi Do mation a ow, sod e Capsul n lauryl e Capsul sulfate, e Capsul sulfate, sulfate, all ti your your healthcare | away. althcare p - '-Car uryl si Caps /0n count, red blo capsules but hospitalized o counts. o Your heal som flet. Do 10/2024 Anyone healthca Tell you sympton feeling tired nausea and CAMBER ask Decreased | and cause y count, red | Temozolomide c child. Talk with y Temazolomide C yellow, sodium k dicines are s rmation leaf prescribed. azolomide (oxide yellov is also body aı and tital ol, shellac, ion side ne sym thcare j hair loss General infor Medicines are Information le not prescribec the same sym or healthcare health profess Inactive ingre pen are Liver some tests which PCP. , tart cap i sed: Sec and Tell yo go awa These inform Call 3