Toripalimab-tpzi

An HCP Tool from AIM with Immunotherapy

Toripalimab-tpzi (Loqtorzi) is a programmed death receptor-1 (PD-1)- blocking antibody made of humanized immunoglobulin G4 (IgG4) kappa immunoglobulin. Due to the antibody binding to the PD-1 receptor, it removes an inhibitory block on the immune response and allows the immune reaction to occur.

It is indicated for use in combination with the two chemotherapeutics, cisplatin and gemcitabine, for the first-line treatment of metastatic or recurrent locally advanced nasopharyngeal carcinoma in adults. It is also indicated for use as monotherapy for the treatment of recurrent unresectable or metastatic nasopharyngeal carcinoma with disease progression after a platinum-containing chemotherapy regimen. Other indications may be forthcoming with ongoing clinical trials.

Clinical trial results for toripalimab-tpzi

In JUPITER-02, a Phase III, international, multicenter, randomized, double-blind study (NCT03581786), toripalimab-tpzi was combined with cisplatin and gemcitabine chemotherapy in patients with recurrent or metastatic nasopharyngeal carcinoma, demonstrating meaningful efficacy and a manageable safety profile.

- The *final* progression-free survival analysis showed that patients receiving toripalimab-tpzi and chemotherapy had longer median progression-free survival (21.4 months) than patients receiving placebo and chemotherapy (8.2 months).
- There was a 37% relative reduction in the risk of death among patients treated with toripalimab-tpzi, with a median overall survival that was not reached with survival follow-up of 36 months.

In POLARIS-02, a Phase II, open-label, single-arm, multicenter, multicohort clinical trial conducted in China (NCT02915432), single-agent toripalimab-tpzi demonstrated a manageable safety profile and durable clinical response among patients with previously treated recurrent or metastatic nasopharyngeal carcinoma.

- Toripalimab-tpzi showed an overall response rate of 20.5%, with all patients receiving previous platinum-containing chemotherapy.
- Treatment response correlated with changes in plasma Epstein-Barr virus DNA levels, which is critical to the pathogenesis and development of nasopharyngeal carcinoma.

Molecular biology and pharmacology for toripalimab-tpzi

The PD-1 receptor is found on the surface of T cells. When the PD-1 receptor is bound to ligands on the cancer cell, called PD-L1, it inhibits the production of cytokines. Engagement of this interaction also prevents T cell proliferation.

When toripalimab-tzpi binds to the PD-1 receptor, it blocks the ‘silencing’ interaction between the T-cell receptor with the ligand on the cancer cell. Blocking this inhibitory immune-system interaction leads to a decrease in tumor growth and a reawakening of the immune response.

Note: Toripalimab-tzpi was originally approved for clinical use in China in 2018. The U.S. FDA approved the drug for nasopharyngeal carcinoma in 2023. It was the first immune checkpoint inhibitor approved for this indication.

DRUG DOSAGE AND ADMINISTRATION

Toripalimab-tpzi is an intravenous injection administered in different dosage strengths, depending on the indication.

When toripalimab-tpzi is used in the first-line setting in combination with intravenous cisplatin (80 mg/m^2) and intravenous gemcitabine (1000 mg/m^2 days 1 and 8), it is administered at a dose of 240 mg every three weeks. For this indication, toripalimab-tpzi is given in combination with up to 6 cycles of cisplatin and gemcitabine, followed by a maintenance phase where it is administered alone at a dose of 240 mg IV every 3 weeks, until disease progression, unacceptable toxicity, or up to 24 months.

If it used as a single agent among patients with previously treated disease, it is administered intravenously at a dose of 3 mg/kg every two weeks, continued until disease progression or unacceptable toxicity.

The first intravenous infusion is given over 60 minutes. Subsequent infusions may be administered over 30 minutes, provided that no infusion-related reactions occurred during the first infusion with toripalimab-tpzi. If an infusion-related reaction occurs during administration, interrupt or slow the rate of infusion. If the infusion-related reaction is severe, stop the infusion.

Other drugs should not be administered through the same line as intravenous toripalamab-tpzi. When administered on the same day as chemotherapy, administer toripalimab prior to chemotherapy.

SIDE EFFECTS AND MANAGEMENT

When toripalimab-tzpi is **administered in combination with cisplatin and gemcitabine, the most common adverse reactions** (≥20%) associated with the combination include nausea, vomiting, decreased appetite, constipation, hypothyroidism, rash, pyrexia, diarrhea, peripheral neuropathy, cough, musculoskeletal pain, upper respiratory infection, insomnia, malaise, and dizziness.

When toripalimab-tzpi is administered as a **single agent, the most common adverse reactions** (≥20%) are fatigue, hypothyroidism, and musculoskeletal pain.

Warnings and Precautions

There are no black boxed warnings associated with toripalimab-tpzi. There are four warnings and precautions in the FDA labeling of toripalimab-tpzi. These include immune-mediated adverse reactions, which can be severe and life-threatening, infusion-related reactions, complications of allogenic hematopoietic stem cell transplantation, and a potential risk of embryo-fetal toxicity. Animal studies demonstrated immune-mediated rejection of the developing fetus, resulting in fetal death. Lactating females are advised not to breastfeed during therapy and for at least 4 months after the last dose of toripalimab.

Immune-mediated Adverse Reaction

For agents that target immune checkpoints, like toripalimab-tpzi, immune-mediated adverse reactions are possible. This is due to the inflammatory reaction of the immune system that can damage organs. Depending on where this occurs, it can manifest as immune-mediated colitis, dermatologic reactions, endocrinopathies (adrenal insufficiency, hypophysitis, thyroid disorders, etc.), hepatitis, nephritis, pneumonitis, or the rejection of solid organ transplantation.

Other immune-mediated adverse reactions were observed in clinical trials. The following is not an all-encompassing list, but the following occurred at an incidence of <1% among patients receiving toripalimab-tzpi: aplastic anemia, arthritis, encephalitis, hypoparathyroidism, iritis, meningitis, pancreatitis, rhabdomyolysis, vasculitis, and uveitis.

Depending on the severity of an immune-mediated adverse reaction, corticosteroid therapy (1 to 2 mg/kg/day prednisone) should be administered until there is improvement to Grade 1 or less. Once there is improvement to Grade 1 or less, the clinician can then initiate corticosteroid taper and continue over at least 1 month.

Colitis

- Grade 2 or 3 = Withhold
- Grades 4 = Permanently discontinue

Endocrinopathies

- Grades 3 or 4 = Withhold until clinically stable or permanently discontinue, depending on severity

Exfoliative Dermatologic Conditions

- Suspected SJS, TEN, or DRESS = Withhold
- Confirmed SJS, TEN, or DRESS = Permanently discontinue

Hepatitis with no tumor involvement in the liver

- AST or ALT increases to more than 3 and up to 8 times ULN = Withhold
- Total bilirubin increases to more than 1.5 and up to 3 times ULN = Withhold
- AST or ALT increases to more than 8 times ULN = Permanently discontinue
- Total bilirubin increases to more than 3 times ULN = Permanently discontinue

Hepatitis with tumor involvement in the liver

- Baseline AST or ALT is more than 1 and up to 3 times ULN and increases to more than 5 and up to 10 times ULN = Withhold
- Baseline AST or ALT is more than 3 and up to 5 times ULN and increases to more than 8 and up to 10 times ULN = Withhold
- Baseline AST or ALT is above the ULN and increases to more than 10 times ULN = Permanently discontinue
- Total bilirubin increases to more than 3 times ULN = Permanently discontinue

Infusion-related reactions

- Grade 1 or 2 = Interrupt or slow the rate of infusion
- Grades 3 or 4 = Stop the infusion and permanently discontinue

Myocarditis

- Grades 2, 3 or 4 = Permanently discontinue

Nephritis with renal dysfunction

- Grade 2 or 3 increased blood creatinine = Withhold
- Grades 4 increased blood creatinine = Permanently discontinue

Neurological toxicities

- Grade 2 = Withhold
- Grades 3 or 4 = Permanently discontinue

Pneumonitis

- Grade 2 = Withhold
- Grades 3 or 4 = Permanently discontinue

OTHER TAKEAWAYS ABOUT ADMINISTRATION

- Embryo-fetal toxicity is possible due to the inflammatory mechanism of action. Animal studies inhibiting the same PD-1/PD-L1 pathway as toripalimab-tzpi have demonstrated increased risk of fetal death.
- In clinical trials, serious adverse reactions occurred in 43% of patients receiving toripalimab-tzpi in combination with cisplatin and gemcitabine.
- Half of patients had dose interruptions due to an adverse reaction with the combination regimen.
- Approximately 24% of patients had serious adverse reactions when toripalimab-tzpi was administered as a single-agent every two weeks.
- Educate patients and caregivers about side effects and the importance of reporting symptoms as soon as possible.

QUESTIONS & ANSWERS

Q. **How long can patients receive toripalimab-tzpi for nasopharyngeal carcinoma?**

A. If the patient is receiving toripalimab-tzpi in combination with chemotherapy for the first-line treatment of nasopharyngeal carcinoma, and disease progression or unacceptable toxicity does not occur, then the drug is given for up to 24 months. Patients receiving toripalimab-tzpi as a single-agent after previous platinum-containing chemotherapy receive the treatment indefinitely until disease progression or unacceptable toxicity.

Q. **How often is the drug discontinued due to an adverse reaction?**

A. In clinical trials of toripalimab-tzpi, permanent discontinuation due to an adverse reaction occurred in 9.0% to 11.6% of treated patients. With single-agent toripalimab-tzpi, the most common adverse reactions leading to treatment discontinuation were pneumonia (1.1%), abnormal hepatic function (1.1%), and hyperbilirubinemia (1.1%).

Q. **How do you modify the dose of toripalimab-tzpi for an adverse event?**

A. There is no dose reduction recommended for toripalimab-tzpi. In general, for Grade 3 immune-mediated adverse reactions, the drug is withheld. For Grade 4 immune-mediated adverse reactions, the drug is permanently discontinued. In addition, if a recurrent, severe Grade 3 immune-mediated adverse reaction occurs that requires systemic immunosuppressive treatment, or an inability to reduce prednisone to 10 mg per day within 12 weeks of initiating steroids, permanently discontinue toripalimab-tzpi. See guidance on specific immune-mediated adverse reactions for more detailed information.

PATIENT RESOURCES

ADDITIONAL INFORMATION RESOURCES

American Cancer Society
Patient programs, services, 24/7 hotline, etc
https://www.cancer.org/

National Cancer Institute
Information about cancer types, treatment, side effects, find a clinical trial, etc
https://www.cancer.gov/

FINANCIAL ASSISTANCE

Cancer Financial Aid Coalition
Facilitates communication, educates and advocates for patients.
www.cancerfac.org

Centers for Medicare and Medicaid Services (CMS)
Apply to determine if you are eligible for government assistance.
www.cms.gov or www.medicare.gov
800-633-4227

Lazarex Foundation
Provides assistance with travel costs for clinical trial participation. Ask your social work counselor for a referral if you have been consented to a clinical trial for melanoma.
www.lazarex.org

Needymeds
Database to search for free or low-cost medications, help with medical transportation and other resources.
www.needymeds.org

Patient Advocate Foundation
Provides assistance with mediation, financial stability, and other assistance. Funds subject to availability. Patient must meet their eligibility for financial assistance.
www.patientadvocate.org
800-532-5274

The Sam Fund for Young Adult Survivors of Cancer
Assists cancer survivors ages 21-39 with their transition into post-treatment life. This program distributes grants and scholarships in an effort to enable survivors to pursue goals.
www.thesamfund.org
info@thesamfund.org

PRESCRIPTION ASSISTANCE

CancerCare Co-Payment Assistance Foundation
Helps with the cost of medication. Availability of funds for patients with specific cancers is subject to availability.
www.cancercarecopay.org
1-866-552-6729

Medicine Assistance Tool
Database to search for patient assistance resources offered by pharmaceutical companies.
www.medicineassistancetool.org/

Patient Advocate Foundation Co-Pay Relief
Provides direct financial support to patients who medically qualify. Funds subject to availability.
https://copays.org
1-866-512-3861

Good Days
Provides assistance with insurance co-pays, and prescription medications. Funds subject to availability.
www.mygooddays.org

Health Well Foundation
For patients who cannot afford insurance premiums, co-payments, co-insurance, or other out-of-pocket health care costs. Funds for patients subject to availability. Patient must also meet eligibility for financial assistance.
www.healthwellfoundation.org or grants@healthwellfoundation.org
1-800-675-8416

The Assistance Fund, Inc
Provides prescription copay and financial assistance, including health insurance premiums. Funds subject to availability.
www.theassistancefund.org
https://tafcares.org
1-855-845-3663

PAN Foundation
Provides financial assistance to cover out-of-pocket treatment costs. Funds subject to availability.
www.panfoundation.org
1-866-316-PANF (7263)

Patient Assistance Program
Comprehensive database of patient assistance programs offering free medications.
www.rxassist.org
info@rxassist.org

HOUSING

American Cancer Society – Hope Lodge
Provides free housing during treatment appointments. Requires a referral from your social worker.
www.cancer.org/
1-800-227-6333.

American Cancer Society – Extended Stay America
Partnership to offer discounted rooms for patients who have to be away from home for cancer treatment.
https://www.cancer.org/about-us/our-partners/extended-stay-america.html
1-800-227-2345

Healthcare Hospitality Network
Connects patients and their caregivers looking for lodging near their healthcare provider
https://members.hhnetwork.org/locate-a-house
1-800-318-8861

Joe's House
Helping patients with cancer find lodging throughout the U.S.
https://www.joeshouse.org/lodging?state=0
1-877-563-7468

National Council of State Housing Agencies
Emergency rental assistance programs available by state. Federal grants still available in some areas.
https://www.ncsha.org/emergency-housing-assistance/

TRANSPORTATION (AIR AND GROUND)

Air Charity Network
Provides access for people in need who are seeking free air transportation to specialized health care facilities
http://aircharitynetwork.org/
1-877-621-7177

Corporate Angel Network
Nonprofit organization that helps cancer patients by arranging free travel on corporate aircraft
https://www.corpangelnetwork.org/
info@corpangelnetwork.org
1-914-328-1313

Medicaid
Ground transportation only. Sets up rides and provides mileage reimbursement for Medicaid patients only.
1-877-633-8747

Mercy Medical Angels
Provides free medical transportation (flights, gas cards, bus and train tickets) for patients with financial needs who need to travel more than 50 miles. Patients must meet their eligibility for financial assistance.
www.mercymedical.org/

Pilots for Patients
Provides free flights to people in need of medical treatment. Patient must be medically stable to fly and be ambulatory. Ask your social worker about a referral.
www.pilotsforpatients.org
318-322-5112

ADDITIONAL RESOURCES

Hua Y, You R, Wang Z et al. Toripalimab plus intensity-modulated radiotherapy for recurrent nasopharyngeal carcinoma: an open-label single-arm, phase II trial. *J Immunother Cancer*. 2021;9(11):e003290. doi: 10.1136/jitc-2021-003290.

LOQTORZI™ (toripalimab-tpzi) injection [prescribing information]. Redwood City, CA, 94065, USA: Coherus BioSciences, Inc. Available at: https://loqtorzihcp.com/loqtorzi-prescribing-information/. Accessed April 22, 2025. Revised October 2024.

Mai H, Chen Q, Chen D et al. Toripalimab or placebo plus chemotherapy as first-line treatment in advanced nasopharyngeal carcinoma: a multicenter randomized phase 3 trial. *Nat Med*. 2021;27(9):1536-1543. doi: 10.1038/s41591-021-01444-0.

Mai H, Chen Q, Chen D et al. Toripalimab Plus Chemotherapy for Recurrent or Metastatic Nasopharyngeal Carcinoma: The JUPITER-02 Randomized Clinical Trial. *JAMA*. 2023;330(20):1961-1970. doi: 10.1001/jama.2023.20181.

U.S. Food and Drug Administration. FDA approves toripalimab-tpzi for nasopharyngeal carcinoma. https://www.fda.gov/drugs/resources-information-approved-drugs/fda-approves-toripalimab-tpzi-nasopharyngeal-carcinoma. Available: 10.27.2023. Accessed: 4.28.2025.

Wang F, Wei X, Feng J et al. Efficacy, Safety, and Correlative Biomarkers of Toripalimab in Previously Treated Recurrent or Metastatic Nasopharyngeal Carcinoma: A Phase II Clinical Trial (POLARIS-02). *J Clin Oncol*. 2021;39(7):704-712. doi: 10.1200/JCO.20.02712.