MEDICINE INFORMATION

Pembrolizumab (Keytruda)

Information for patients and caregivers about pembrolizumab: treatment, monitoring, side effects and everyday care.

Pembrolizumab at a glance

Pembrolizumab is used in selected treatment plans for several cancers, including melanoma, non-small cell lung cancer and triple-negative breast cancer; the stage, relevant tumour tests and other medicines in the plan determine whether it is suitable.

Pembrolizumab (Keytruda) is an immune checkpoint inhibitor given as an intravenous infusion or a specific under-the-skin formulation. Keytruda is usually recognised as a drip, but a separate subcutaneous formulation is also available. Keytruda Qlex contains pembrolizumab with berahyaluronidase alfa. The formulations use different doses and require an explicit prescription.

This page explains preparation, everyday care and symptoms that need attention. Use it alongside your own hospital's treatment plan. Do not change medicines or appointment intervals without the treating team.

What is pembrolizumab, and how does it work?

Pembrolizumab blocks an immune checkpoint called PD-1. Checkpoints help prevent immune cells from attacking healthy tissue. Some cancer cells exploit these signals to avoid attack; blocking the signal can help immune cells recognise and act against cancer. This is a form of immunotherapy, with a different mechanism from conventional chemotherapy.

Immune activation can also affect normal organs. A new symptom may therefore need assessment even when it seems unrelated to the cancer. Neither strong side effects nor their absence proves whether treatment is working.

How your team decides whether it is suitable

Pembrolizumab may be given on its own or with other treatment. Your team will check the cancer type, stage, previous treatments and whether the plan includes surgery. Tell the team about any allergies. The under-the-skin formulation Keytruda Qlex has a separate product label and is unsuitable if you have a known allergy to its hyaluronidase component or another ingredient.

The same biomarker result may be reported in different ways. PD-L1 may use the combined positive score (CPS) or the tumour proportion score (TPS). Other tests look at DNA repair (MMR or MSI) or count changes in the tumour DNA (tumour mutational burden, or TMB). Ask which test and result apply to your treatment.

Approved uses by country

FDA (United States), EMA (European Union) and CDSCO (India).

Each treatment use is listed once. Eligibility can differ by country.

Approved by FDA, EMA and CDSCO

With gemcitabine and cisplatin

Locally advanced unresectable or metastatic bile duct or gallbladder cancer. With gemcitabine and cisplatin.

- **EU (EMA) · India (CDSCO).** First treatment in adults.

Advanced disease with enfortumab vedotin

Advanced urothelial cancer. With enfortumab vedotin for adults.

- **US (FDA).** For locally advanced or metastatic disease.
- **EU (EMA).** As first treatment for unresectable or metastatic disease. The EU information for enfortumab also specifies that patients can have platinum-based chemotherapy.
- **India (CDSCO).** As first treatment for unresectable or metastatic disease if platinum chemotherapy can be given.

Breast cancer

Triple-negative breast cancer before and after surgery

With chemotherapy before surgery, then alone after surgery.

- **US (FDA).** High-risk early triple-negative breast cancer.
- **EU (EMA).** Locally advanced or high-risk early triple-negative breast cancer. For adults.
- **India (CDSCO).** Locally advanced or high-risk early triple-negative breast cancer.

Advanced triple-negative breast cancer with chemotherapy

Locally recurrent unresectable or metastatic triple-negative breast cancer. With chemotherapy for tumours with a PD-L1 combined positive score (CPS) of 10 or higher.

- **US (FDA).** The marker result must come from an FDA-authorised test.
- **EU (EMA) · India (CDSCO).** For adults who have not previously had chemotherapy for metastatic disease.

Cervical cancer

Locally advanced cervical cancer with chemoradiotherapy

Locally advanced cervical cancer. With chemoradiotherapy for FIGO 2014 stages III-IVA.

- **EU (EMA) · India (CDSCO).** For adults who have not had prior definitive treatment.

Persistent, recurrent or metastatic cervical cancer with chemotherapy

Persistent, recurrent or metastatic cervical cancer. With chemotherapy, with or without bevacizumab, for tumours with a PD-L1 combined positive score (CPS) of 1 or higher.

- **US (FDA).** The marker result must come from an FDA-authorised test.
- **India (CDSCO).** For adults.

MSI-high or mismatch repair-deficient colorectal cancer

- **US (FDA).** For unresectable or metastatic disease. The marker result must come from an FDA-authorised test.
- **EU (EMA) · India (CDSCO).** First treatment with pembrolizumab alone for adults with metastatic disease.
- **EU (EMA).** Pembrolizumab alone for adults with unresectable or metastatic disease after a previous fluoropyrimidine-based combination.

Treatment around surgery

Resectable locally advanced head and neck squamous cell cancer. Pembrolizumab alone before surgery, then with radiotherapy with or without cisplatin, followed by pembrolizumab alone. The tumour must have a PD-L1 combined positive score (CPS) of 1 or higher.

- **US (FDA).** The marker result must come from an FDA-authorised test.

Classical Hodgkin lymphoma that returned or resisted treatment

- **US (FDA).** Relapsed or refractory classical Hodgkin lymphoma, adults. For disease that returned or resisted treatment.
- **US (FDA).** Relapsed or refractory classical Hodgkin lymphoma, children. For disease that resisted treatment or returned after at least two lines of treatment.
- **EU (EMA).** Relapsed or refractory classical Hodgkin lymphoma. After an unsuccessful autologous stem cell transplant, or after at least two previous treatments when such a transplant is unsuitable. For adults and children aged 3 years and older.
- **India (CDSCO).** Relapsed or refractory classical Hodgkin lymphoma. After an unsuccessful autologous stem cell transplant, or after at least two previous treatments when such a transplant is unsuitable. For adults.

Kidney cancer

- **Advanced renal cell carcinoma.** First treatment for adults with axitinib.

Pembrolizumab alone after surgery

Renal cell carcinoma after surgery. Pembrolizumab alone to reduce the chance of cancer returning after kidney removal, with or without removal of metastases.

- **US (FDA).** For people at intermediate-high or high risk of recurrence.
- **EU (EMA) · India (CDSCO).** For adults at increased risk of recurrence.

Lung cancer

First treatment with pembrolizumab alone

- **US (FDA).** Non-small cell lung cancer, first treatment alone. For metastatic disease or stage III disease unsuitable for surgery or definitive chemoradiotherapy. The tumour must have a PD-L1 tumour proportion score (TPS) of 1% or higher and no EGFR or ALK alterations. The marker result must come from an FDA-authorised test.
- **EU (EMA) · India (CDSCO).** Metastatic non-small cell lung cancer, first treatment alone. For adults with a PD-L1 tumour proportion score (TPS) of 50% or higher and no EGFR or ALK positive mutations.

Treatment before and after surgery

Resectable non-small cell lung cancer. With platinum-based chemotherapy before surgery, then pembrolizumab alone after surgery.

- **US (FDA).** The tumour must be at least 4 cm across or involve lymph nodes.
- **EU (EMA) · India (CDSCO).** For adults at high risk of the cancer returning.

Pembrolizumab alone after surgery and chemotherapy

Non-small cell lung cancer after surgery. Pembrolizumab alone after complete removal and platinum-based chemotherapy.

- **US (FDA).** For adults with stage IB (T2a at least 4 cm), II or IIIA disease.
- **EU (EMA) · India (CDSCO).** For adults at high risk of the cancer returning.

Pembrolizumab alone for advanced disease after chemotherapy

- **US (FDA).** Metastatic non-small cell lung cancer, after chemotherapy. Pembrolizumab alone if the cancer progressed during or after platinum chemotherapy and has a PD-L1 tumour proportion score (TPS) of 1% or higher. People with EGFR or ALK alterations must also have progressed after FDA-approved targeted treatment for the alteration. The marker result must come from an FDA-authorised test.
- **EU (EMA) · India (CDSCO).** Locally advanced or metastatic non-small cell lung cancer, after chemotherapy. For adults with a PD-L1 tumour proportion score (TPS) of 1% or higher who have already had at least one chemotherapy regimen. People with an EGFR or ALK alteration should also have had targeted treatment.

Melanoma

Advanced melanoma

For melanoma that cannot be removed by surgery or has spread.

- **EU (EMA).** For adults and adolescents aged 12 and older.

Melanoma after surgery

- **US (FDA) · EU (EMA).** Stage IIB, IIC or III melanoma after surgery. For adults and adolescents aged 12 and older after complete removal, to help prevent recurrence.

- **India (CDSCO).** Stage III melanoma with lymph node involvement after surgery. Pembrolizumab alone for adults after complete removal.

With platinum and fluoropyrimidine chemotherapy

- **US (FDA).** Locally advanced or metastatic oesophageal or junctional cancer. With platinum and fluoropyrimidine chemotherapy if surgery or definitive chemoradiotherapy is unsuitable and the tumour has a PD-L1 combined positive score (CPS) of 1 or higher. For junctional cancer, the centre of the tumour must lie 1-5 cm above the junction. The marker result must come from an FDA-authorised test.
- **EU (EMA).** Locally advanced unresectable or metastatic oesophageal cancer. First treatment in adults with platinum and fluoropyrimidine chemotherapy for tumours with a PD-L1 combined positive score (CPS) of 10 or higher.
- **India (CDSCO).** Locally advanced unresectable or metastatic cancer of the oesophagus or HER2-negative junctional adenocarcinoma. First treatment in adults with platinum and fluoropyrimidine chemotherapy, when the tumour has a PD-L1 combined positive score (CPS) of 10 or higher.

HER2-negative adenocarcinoma

HER2-negative stomach or gastro-oesophageal junction adenocarcinoma. First treatment for adults with locally advanced unresectable or metastatic disease, with fluoropyrimidine and platinum chemotherapy. The tumour must have a PD-L1 combined positive score (CPS) of 1 or higher.

- **US (FDA).** The marker result must come from an FDA-authorised test.

Approved by FDA and EMA

Bladder and other urothelial cancers

Pembrolizumab alone for advanced disease

Locally advanced or metastatic urothelial cancer.

- **US (FDA).** Pembrolizumab alone when platinum chemotherapy is unsuitable or when the cancer grew during or after platinum chemotherapy, including within 12 months of platinum chemotherapy before or after surgery.
- **EU (EMA).** Pembrolizumab alone in adults previously treated with platinum chemotherapy.
- **EU (EMA).** Pembrolizumab alone in adults who cannot have cisplatin chemotherapy and whose tumour has a PD-L1 combined positive score (CPS) of 10 or higher.

Muscle-invasive bladder cancer around surgery

Muscle-invasive bladder cancer. With enfortumab vedotin before and after surgery to remove the bladder.

- **EU (EMA).** For adults whose cancer can be removed by surgery.

Head and neck cancer

First treatment for metastatic or unresectable recurrent disease

Metastatic or unresectable recurrent head and neck squamous cell cancer.

- **US (FDA).** First treatment with platinum and fluorouracil (5-FU).
- **US (FDA).** First treatment with pembrolizumab alone for tumours with a PD-L1 combined positive score (CPS) of 1 or higher. The marker result must come from an FDA-authorised test.
- **EU (EMA).** First treatment in adults, either alone or with platinum and fluorouracil (5-FU), when the tumour has a PD-L1 combined positive score (CPS) of 1 or higher.

Recurrent or metastatic disease after platinum chemotherapy

Recurrent or metastatic head and neck squamous cell cancer after platinum chemotherapy.

- **US (FDA).** Pembrolizumab alone for disease that grew during or after platinum chemotherapy.
- **EU (EMA).** Pembrolizumab alone for adults whose cancer grew during or after platinum chemotherapy, with a PD-L1 tumour proportion score (TPS) of 50% or higher.
- **Advanced renal cell carcinoma.** First treatment for adults with lenvatinib.

Lung cancer

- **Metastatic non-squamous non-small cell lung cancer.** First treatment with pemetrexed and platinum chemotherapy, for tumours without EGFR or ALK alterations.
- **Metastatic squamous non-small cell lung cancer.** First treatment with carboplatin plus paclitaxel or nab-paclitaxel.

Platinum-resistant cancer with paclitaxel

Platinum-resistant epithelial ovarian, fallopian tube or primary peritoneal cancer. With paclitaxel, with or without bevacizumab, for adults with a PD-L1 combined positive score (CPS) of 1 or higher after one or two prior systemic treatment regimens.

- **US (FDA).** The marker result must come from an FDA-authorised test.

First treatment with pemetrexed and platinum chemotherapy

First treatment for adults with pemetrexed and platinum chemotherapy.

- **US (FDA).** Unresectable advanced or metastatic malignant pleural mesothelioma.
- **EU (EMA).** Unresectable non-epithelioid malignant pleural mesothelioma.

HER2-positive adenocarcinoma

HER2-positive stomach or gastro-oesophageal junction adenocarcinoma. First treatment for adults with locally advanced unresectable or metastatic disease, with trastuzumab and fluoropyrimidine and platinum chemotherapy. The tumour must have a PD-L1 combined positive score (CPS) of 1 or higher.

- **US (FDA).** The marker result must come from an FDA-authorised test.

Uterine (endometrial) cancer

With carboplatin and paclitaxel

Primary advanced or recurrent endometrial cancer. With carboplatin and paclitaxel for adults.

- **US (FDA).** Pembrolizumab continues on its own afterwards.
- **EU (EMA).** First treatment in adults who are candidates for systemic treatment.

With lenvatinib

- **US (FDA).** Advanced endometrial cancer. With lenvatinib for adults whose cancer grew after systemic therapy and who cannot have curative surgery or radiotherapy. The tumour must be mismatch repair proficient (pMMR) or not MSI-high. The marker result must come from an FDA-authorised test.
- **EU (EMA).** Advanced or recurrent endometrial cancer. With lenvatinib for adults whose cancer grew during or after platinum-containing treatment in any setting and who cannot have curative surgery or radiotherapy.

Pembrolizumab alone

- **US (FDA).** Advanced endometrial cancer. Pembrolizumab alone for adults whose cancer grew after systemic therapy and who cannot have curative surgery or radiotherapy. The tumour must be MSI-high or mismatch repair deficient. The marker result must come from an FDA-authorised test.
- **EU (EMA).** MSI-high or mismatch repair-deficient endometrial cancer. Pembrolizumab alone for adults with advanced or recurrent disease that grew during or after platinum-containing treatment in any setting, when surgery or radiotherapy cannot be given to try to cure it.

Other FDA approvals

- **High-risk non-muscle-invasive bladder cancer after BCG.** Pembrolizumab alone for disease that did not respond to BCG, with carcinoma in situ with or without papillary tumours, when bladder removal is unsuitable or the person chooses against it.
- **Unresectable locally advanced or metastatic triple-negative breast cancer.** First treatment in adults with sacituzumab govitecan for tumours with a PD-L1 combined positive score (CPS) of 10 or higher. The marker result must come from an FDA-authorised test.
- **Recurrent or metastatic cervical cancer after chemotherapy.** Pembrolizumab alone for disease that grew during or after chemotherapy, with a PD-L1 combined positive score (CPS) of 1 or higher. The marker result must come from an FDA-authorised test.
- **Renal cell carcinoma with a clear-cell component after surgery.** With belzutifan for adults at intermediate-high or high risk of recurrence after kidney removal, with or without removal of metastases.
- **Liver cancer associated with hepatitis B.** For people who have received previous systemic treatment that did not contain a PD-1 or PD-L1 inhibitor.

- **Locally advanced or metastatic oesophageal squamous cell cancer after prior treatment.** Pembrolizumab alone after at least one prior systemic regimen when surgery or definitive chemoradiotherapy is unsuitable. The tumour must have a PD-L1 combined positive score (CPS) of 10 or higher. For a tumour near the junction, its centre must lie 1-5 cm above it. The marker result must come from an FDA-authorised test.
- **Primary mediastinal large B-cell lymphoma.** For adults and children with disease that resisted treatment or returned after at least two prior treatments. The label excludes use when a rapid reduction in tumour burden is needed.

Skin cancers other than melanoma

- **Merkel cell carcinoma.** For adults and children with recurrent locally advanced or metastatic disease.
- **Cutaneous squamous cell carcinoma.** For recurrent or metastatic skin cancer, or locally advanced skin cancer that cannot be cured with surgery or radiotherapy.

Solid tumours selected by biomarker

- **MSI-high or mismatch repair-deficient solid tumours.** For adults and children with unresectable or metastatic disease that grew after treatment, with no satisfactory alternative. The marker result must come from an FDA-authorised test.
- **Solid tumours with high tumour mutational burden (TMB).** For adults and children with unresectable or metastatic cancer that grew after treatment, with no satisfactory alternative. An FDA-authorised test must show at least 13 mutations per megabase.

Other EMA approvals

- **MSI-high or mismatch repair-deficient biliary cancer.** Pembrolizumab alone for adults with unresectable or metastatic disease that grew during or after at least one prior treatment.
- **MSI-high or mismatch repair-deficient small intestine cancer.** Pembrolizumab alone for adults with unresectable or metastatic disease that grew during or after at least one prior treatment.
- **MSI-high or mismatch repair-deficient stomach cancer.** Pembrolizumab alone for adults with unresectable or metastatic disease that grew during or after at least one prior treatment.

Before treatment starts

Your team will ask about autoimmune conditions, previous organ or donor stem-cell transplantation, lung or heart disease, infections and earlier cancer treatment. Mention previous severe reactions to any immunotherapy, even if you are now well. Tell them about pregnancy, breastfeeding, any possibility of pregnancy and whether you want to discuss fertility preservation before starting.

Bring a complete medicines list, including inhalers, eye drops, steroid creams, tablets, injections, vitamins and traditional or herbal remedies. A medicine taken only occasionally can still matter. Do not stop prescribed steroids or immune-suppressing treatment yourself; the team must weigh why you need them and how they fit with treatment.

Baseline tests usually include blood counts, kidney and liver function, blood sugar and thyroid function. For pembrolizumab used before surgery for triple-negative breast cancer, cortisol is checked before treatment, before surgery and when clinically indicated. Other hormone tests, heart tests or infection screening depend on your history and treatment plan. Record your usual bowel pattern, breathing, energy level and any existing rash. This makes it easier to identify a change rather than attributing everything to cancer.

Before leaving the first appointment, know how to reach your own hospital's urgent oncology service, including outside clinic hours. Keep the treatment alert card or an up-to-date medicine record with you. A family member can help remember instructions and recognise changes you may not notice yourself.

How treatment is given

Common adult intravenous schedules are 200 mg every three weeks or 400 mg every six weeks, infused over 30 minutes. Some younger patients use a weight-based prescription. Treatment may be given alone or alongside other medicines; this changes appointment length and the overall safety plan.

The US subcutaneous product, Keytruda Qlex, contains pembrolizumab and berahyaluronidase alfa. Its standard fixed doses are 395 mg with 4,800 units every three weeks, injected over about one minute, or 790 mg with 9,600 units every six weeks, injected over about two minutes. It is administered by a healthcare professional into the abdomen or thigh. The EU Keytruda information also includes a subcutaneous formulation. Suitability depends on the exact prescription, age, body weight and treatment setting.

Intravenous and subcutaneous amounts are not interchangeable milligram for milligram. The shorter injection does not remove the need for assessment, blood tests or observation. Some plans have a defined duration, while others use response and tolerance; there is no universal stopping date.

A nurse checks your identity, prescription and recent symptoms before administration. Tell staff immediately about flushing, itching, chills, back pain, wheezing or dizziness. Staff can stop or slow an infusion and provide treatment. Do not leave the unit with unexplained new symptoms. If a line remains in place between visits, follow the dressing and flushing instructions and report redness, pain, leakage or fever.

Monitoring and checking whether treatment is working

Before treatment, staff review symptoms and blood results to check that another dose is appropriate. Some immune problems first appear on a blood test, before you feel unwell. Thyroid, liver, kidney or glucose abnormalities may need repeat tests, additional investigations or another specialist's advice.

Scans and, where appropriate, other disease measurements assess whether treatment is helping. Feeling well or having side effects cannot reliably tell you whether it is working. Occasionally immune inflammation complicates the interpretation of a scan; your oncologist decides whether a repeat scan or other assessment is appropriate. Worsening symptoms should still be reported promptly.

A dose may be delayed while a new symptom is investigated. Checkpoint antibodies are commonly withheld or stopped for significant toxicity rather than simply reduced to a smaller dose. This is a safety decision, not evidence that you have done anything wrong. The team balances cancer control with recovery and the risk of the same reaction happening again.

Common side effects and how to manage them

Side effects vary with the medicine, your health and any accompanying treatment. You may have several, a few or none. The following effects are commonly encountered across checkpoint treatment; their frequency is not identical in every regimen.

Tiredness and reduced energy

Plan demanding tasks for the time of day when you feel best, accept practical help and include gentle activity if you can. Rest is useful, but spending the entire day in bed can make weakness worse. A sudden increase in tiredness, dizziness or inability to manage normal activities needs assessment for anaemia, infection or hormone problems rather than being accepted as inevitable.

Skin rash and itching

Use a plain moisturiser, lukewarm water and comfortable clothing. Protect your skin from strong sunlight. Let the team know about a new rash; photographs can help show how it changes. Do not use a new medicated cream without checking. Blisters, peeling skin, mouth sores or a painful widespread rash need urgent help.

Loose stools or diarrhoea

Note how many times you pass stool compared with your normal pattern, whether it wakes you at night and whether there is pain, mucus or blood. Keep drinking unless you have a fluid restriction. Contact your team promptly for new or increasing diarrhoea. Do not repeatedly suppress it with over-the-counter medicines before the team has considered immune bowel inflammation.

Nausea, appetite changes and constipation

Small, regular meals and prescribed anti-sickness medicines may help. Ask for dietetic support if weight is falling or eating is difficult. Constipation can be related to other medicines or reduced activity; discuss an appropriate laxative rather than straining. Persistent vomiting, a swollen abdomen, severe pain or inability to keep fluids down requires urgent advice.

Muscle and joint discomfort

Gentle movement, pacing and the team’s recommended pain relief can help. Check before taking ibuprofen or similar anti-inflammatory medicines, especially with kidney problems or other treatment. New marked weakness, drooping eyelids, difficulty swallowing or dark urine is different from ordinary aching and needs urgent assessment.

Less common but important side effects

Checkpoint treatment can make the immune system inflame healthy organs. Several organs can be affected together. Problems may appear during treatment or after it stops, and a symptom does not have to be dramatic to deserve attention.

Lung inflammation

New cough, breathlessness or chest discomfort can reflect inflammation called pneumonitis, infection or another problem. Contact the team promptly. Severe breathlessness, blue lips, collapse or difficulty speaking because of breathing requires emergency care.

Bowel and liver inflammation

Immune colitis can cause diarrhoea, cramps, blood or mucus, and occasionally serious bowel damage. Liver inflammation may initially show only on blood tests. Yellow eyes or skin, dark urine, right-sided upper abdominal pain or unusual bruising needs prompt assessment. Do not assume an existing digestive or liver condition explains a new change.

Hormone gland problems and diabetes

Thyroid, pituitary or adrenal inflammation can cause unusual tiredness, headache, feeling cold, weight changes, dizziness or altered mood. New excessive thirst and frequent urination can signal diabetes. Vomiting with marked thirst, deep or rapid breathing, confusion or severe weakness is an emergency. Some hormone deficiencies require long-term replacement even after the immune inflammation settles.

Kidney, heart, muscle and nerve problems

Reduced urine, blood in the urine or swelling may indicate kidney injury. Chest pain, palpitations, faintness, rapid weakness, swallowing difficulty, confusion or a seizure can signal serious heart or nervous-system effects. Heart, muscle and nerve inflammation can overlap. Do not wait for all the symptoms in a list to appear.

Eye problems, severe skin reactions and transplant complications

Eye pain, light sensitivity or new blurred vision needs urgent advice. Severe rash with blistering, peeling or mouth involvement needs immediate assessment. Checkpoint activation can also cause transplant rejection or complications around a donor stem-cell transplant. Tell every treating specialist that you have received this medicine.

How immune side effects are treated

Treatment may involve temporarily withholding immunotherapy, corticosteroids, hormone replacement or other specialist medicines. Severe reactions sometimes require hospital care and permanent discontinuation. Severe infusion or injection reactions, confirmed serious blistering skin reactions and significant myocarditis require stopping treatment under specialist care. Do not receive another dose while a suspected serious reaction is awaiting assessment. Take the steroid taper exactly as prescribed; stopping abruptly can be dangerous. Early reporting often makes management more straightforward, but no one can promise that every effect will completely reverse.

Additional points for this treatment

Injection-site reactions and allergy to a formulation component are additional considerations with subcutaneous treatment. Immune toxicity can still affect the lungs, bowel, hormones and other organs. When pembrolizumab accompanies chemotherapy, a targeted drug or an antibody-drug conjugate, those medicines can add very different adverse effects.

When to seek urgent medical help

Call local emergency services or go to the nearest emergency department immediately for severe breathing difficulty, severe chest pain, collapse, a seizure, major confusion, rapidly developing weakness, severe abdominal pain or a rapidly spreading blistering rash. Do not wait for a callback and do not drive yourself.

Contact your own oncology team or hospital's urgent advice service promptly for new or worsening diarrhoea, cough, unexplained bruising or bleeding, jaundice, reduced urine, persistent headache, visual change, excessive thirst, a new rash or a clear deterioration in how you feel. Mention the drug name and the date of your last dose, even if treatment has finished.

Follow your hospital's temperature instructions. If you have not been given a threshold, seek urgent oncology advice for a temperature of 37.5°C (99.5°F) or above, below 36°C (96.8°F), shaking chills or feeling acutely unwell. Do not wait for fever if you are deteriorating. Measure temperature before taking fever-reducing medicine where possible, but do not delay seeking help.

Other medicines, supplements and vaccinations

Check new prescriptions, non-prescription medicines, supplements and herbal products with the cancer team or pharmacist. Avoid products marketed as "immune boosters": they are not proven substitutes for treatment and can complicate safety assessment. Do not assume a natural product is harmless.

Steroids may be essential to treat immune side effects, despite the medicine's aim of activating immunity. Never withhold necessary steroids because you are worried they will cancel the treatment. Equally, do not start leftover steroid tablets yourself. If you require hormone replacement or long-term steroids, carry the relevant alert information.

Discuss influenza, COVID-19 and other vaccines with the team. Non-live vaccines are often appropriate, but timing and response depend on the full treatment, particularly chemotherapy or immune-suppressing medicines. Live vaccines need specific specialist approval. There is no single post-treatment vaccine waiting period that is correct for every checkpoint-treated patient.

Everyday life during treatment

Eating does not alter the dose of a medicine given by infusion or injection. Aim for adequate fluids and regular food, adjusting for nausea or diarrhoea, and follow any kidney, heart or diabetes advice already in place. Avoid restrictive diets or supplements promising to improve immune treatment response.

Work and exercise can continue if you feel able, with flexibility around appointments and fatigue. Start activity gently and reduce it when unwell. Do not drive if you are dizzy, sleepy, weak, visually affected or unable to concentrate. Premedicines and pain medicines can also impair driving. Sudden neurological symptoms require assessment, not simply a rest before driving again.

Discuss travel before booking, especially long journeys or places far from emergency care. Keep your treatment record, medicines list and enough prescribed medicines with you. Tell dentists and other clinicians about immunotherapy before procedures. Wash hands, avoid close contact with people who are clearly infectious and use food safety precautions; complete isolation is not usually necessary solely because you are receiving a checkpoint inhibitor.

Sex is generally possible if comfortable, with the contraception precautions below. Symptoms, dryness or fatigue may affect intimacy and can be discussed without embarrassment. Emotional support can help with uncertainty between scans; report persistent anxiety, poor sleep or low mood rather than carrying it alone.

Fertility, contraception, pregnancy and breastfeeding

If you could become pregnant, use effective contraception throughout treatment and for at least 4 months after the final dose. Pregnancy status should be checked before treatment when relevant. Contact the team immediately if you become pregnant, suspect pregnancy or have a contraceptive failure; do not wait for the next appointment.

The US prescribing information advises against breastfeeding during treatment and for 4 months after the last dose. EU wording may express the breastfeeding decision differently, so agree a feeding and restart plan using the product you receive. Other anticancer medicines can require longer precautions.

Effects on future fertility are not fully established. Discuss sperm, egg or embryo preservation before treatment if this matters to you, especially when chemotherapy is also planned. The pregnancy-prevention interval above applies to a person who can become pregnant; do not assume it is an evidence-based universal rule for male partners. Your team should give partner advice for the complete regimen.

After treatment finishes

Keep attending the follow-up appointments and tests recommended by your team. Immune side effects can start after the final dose, so continue to mention previous immunotherapy when seeking medical care. Keep your alert card or treatment summary accessible and tell emergency staff about the medicine even months later.

Continue prescribed hormone replacement, steroid tapering and other supportive treatment. Do not stop these because the anticancer infusion has finished. Follow the specified contraception and breastfeeding restrictions from the date of the final relevant dose. Recovery is individual; ask for rehabilitation, nutritional support or help returning to work if symptoms persist.

Frequently asked questions

Can Keytruda be given as a short injection?

Yes, a specific subcutaneous product is available, including Keytruda Qlex in US prescribing information. It uses pembrolizumab with an enzyme that helps absorption under the skin. It needs its own prescription and suitability check; an ordinary intravenous vial is not used as an under-the-skin injection.

Are three-weekly and six-weekly Keytruda the same dose?

No. Standard adult intravenous schedules pair 200 mg with three weeks and 400 mg with six weeks. Subcutaneous schedules use different amounts again. Your team selects a complete dose-and-interval plan rather than changing one part independently.

Do I need all the immunotherapy marker tests?

No. The tests described under “How your team decides whether it is suitable” have different roles. Your doctor will recommend those relevant to your cancer and the proposed treatment. Some plans require a specific result, but no marker guarantees a response. Ask how each result would change your treatment options.

Will I always stop pembrolizumab after two years?

No. Some plans use a two-year limit, others a shorter planned course or a different stopping rule. Your oncologist should explain the intended duration, how benefit is assessed and what would trigger stopping early. Do not extend or stop treatment based on another patient’s experience.

Will Keytruda make my hair fall out?

Marked hair loss is less typical of a checkpoint antibody used alone than of many chemotherapy regimens, but thinning or immune-related hair changes can occur. Accompanying chemotherapy may cause substantial loss. The full treatment list gives a more useful prediction than the immunotherapy name alone.

Can I feel well and still need blood tests?

Yes. Liver, kidney, thyroid and glucose changes can precede symptoms. Regular tests help the team decide whether it is safe to proceed. Do not skip monitoring because the previous dose felt easy, and do not assume a normal test means a later new symptom is harmless.

Does having no side effects mean pembrolizumab is not working?

No. Side effects measure tolerability, not reliably the anticancer response. Some people benefit with few symptoms, while others have toxicity without benefit. Your team uses scans, disease measurements and clinical review, rather than side-effect intensity, to assess treatment.

What happens if my next treatment is delayed?

The team will set a new date after considering the reason, your blood tests and symptoms. A delay for assessment or recovery is a recognised part of safe treatment. Do not try to make up a missed visit by shortening the next interval or obtaining a dose elsewhere without coordination.

Can an immune side effect begin after Keytruda has stopped?

Yes. Immune activity can persist beyond the final administration. Report new symptoms and tell the assessing clinician about past checkpoint treatment. Keeping a treatment record is useful, particularly if you attend a different hospital that cannot see your oncology notes.

Why might I need steroids during pembrolizumab treatment?

Steroids can control harmful inflammation caused by an activated immune system. The benefit of promptly treating a serious reaction outweighs trying to preserve immune activation at all costs. Take the prescribed course and taper, and contact the team if vomiting prevents you from keeping essential doses down.

Can I have vaccinations while receiving Keytruda?

Discuss the particular vaccine and the timing. Many non-live vaccines are useful, but the full cancer regimen and any steroids influence the advice. Live vaccines require specialist approval. A rule intended for someone having intensive chemotherapy should not automatically be applied to every checkpoint regimen.

Can I keep working between appointments?

Often, with adjustments for fatigue and clinic visits. Build flexibility into demanding days and arrange help during periods of illness. New severe fatigue or dizziness should be checked, not merely worked around. Your employer may be able to offer shorter hours, remote work or temporary changes in duties.

Should I use a supplement to boost the immune effect?

There is no established supplement that reliably makes this treatment work better. Some products interact with other medicines or affect liver tests. Bring the exact product and ingredient list to the pharmacist before using it, including remedies supplied without a formal prescription.

Can I breastfeed or try for pregnancy during treatment?

Pregnancy and breastfeeding need a specific plan because checkpoint antibodies may harm a developing baby or breastfed infant. Use the drug-specific interval given in the pregnancy section and account for other medicines. Contact your team immediately if pregnancy occurs or you think contraception has failed.

Does a new symptom always mean immune inflammation?

No. Infection, cancer, another medicine and unrelated illnesses can produce similar symptoms. That is why assessment matters. Do not diagnose the cause yourself or start leftover antibiotics or steroids. Describe the timing and change from your normal state so the team can investigate appropriately.

Sources and review information

Sources checked: 28 September 2026. This information should be read with the current leaflet for the exact product prescribed.

- Macmillan Cancer Support
- Cancer Research UK
- US prescribing information
- US prescribing information - subcutaneous formulation
- National Cancer Institute - Biomarker testing for cancer treatment

Additional sources

Summary of Product Characteristics (SmPC)

- Keytruda (pembrolizumab): Summary of Product Characteristics - EMA product information, Annex I (PDF)

Regulatory references

- October 2026 United States prescribing information for Keytruda
- FDA October 2026 Keytruda prescribing information, section 1.18
- CDSCO import approvals and additional indications for pembrolizumab and enfortumab vedotin
- CDSCO Form 45, original pembrolizumab approval and lung cancer uses
- EMA Summary of Product Characteristics for Padcev

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