



What do I need to know?

My new daily routine with KEYTRUDA®

Booklet to be given to patients in KEYTRUDA®
therapy by the attending physicians

KEYTRUDA® is a cancer treatment medicine and one of the novel immunotherapies. This type of medicine may boost the body's immune system by strengthening its existing ability to fight cancer cells.

We wish you all the best!

The MSD Team



Please read the package leaflet about risks and side effects and ask your doctor or pharmacist.

If you get any side effects, talk to your doctor.

This includes any possible side effects not listed in the package leaflet.

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Gender-specific language is not used solely for the purpose of better readability. Consequently, all personal terms should be understood as pertaining to all sexes.

Introduction

Your doctor has prescribed you KEYTRUDA® (Pembrolizumab). This guidance booklet gives you information about immunotherapy with this medicine.

This booklet will tell you how KEYTRUDA® works and what you should pay attention to during your treatment. Side effects that could occur during the treatment will be described and how you recognize them will be explained. In addition, you will learn why it is important to tell your doctor about

every disease symptom immediately, what else you can do to assist your therapy and who you can talk to about your disease.

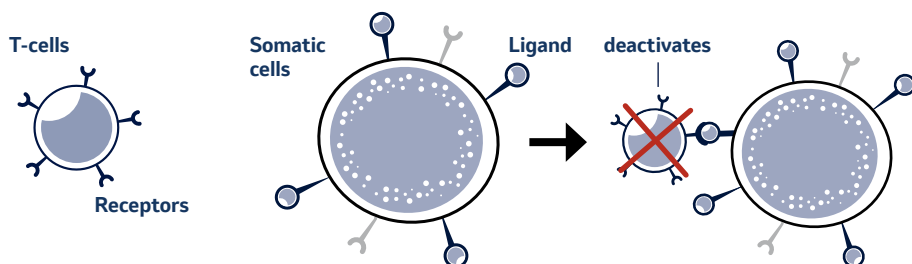
At the end of the booklet, you will find addresses of websites with more detailed information that could be useful to you.



How does KEYTRUDA[®] act on cancers?

The medicine prescribed to you is an immuno-oncology therapy (immune checkpoint inhibitor). This type of medicine boosts the body's immune system by strengthening its existing ability to fight cancer cells, which can be inhibited by certain mechanisms. This medicine is what is called an antibody. An antibody is a protein molecule that can very specifically identify a certain target and bind to it. KEYTRUDA[®] (Pembrolizumab) binds to immune system cells, or T-cells, which enables them to identify and fight cancer cells again.

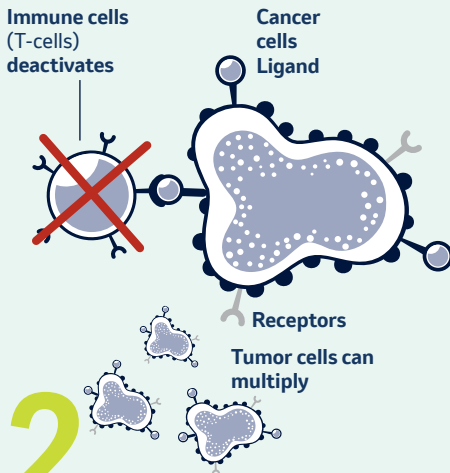
How does the therapy work?



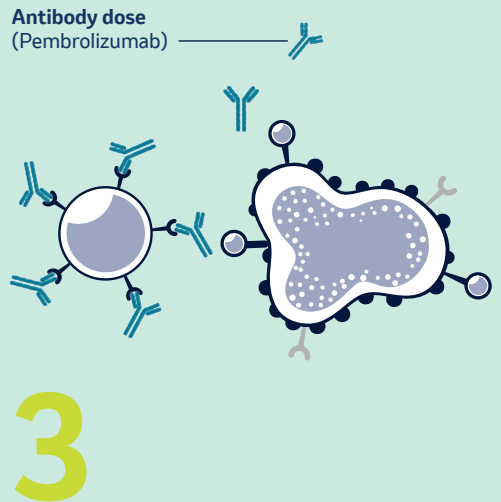
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Among other things, T-cells have a specific receptor on their surface, and the somatic cells have a matching ligand. The receptor and the ligand fit together like a specific key in a specific lock. If the

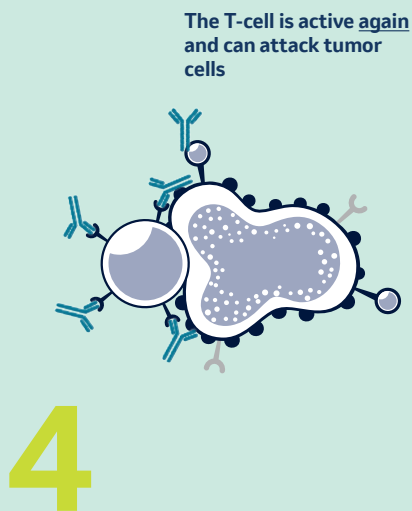
T-cells and the somatic cells meet, the ligand binds to the receptor. This prevents the somatic cells from being unnecessarily attacked (autoimmune reaction) by the T-cells.



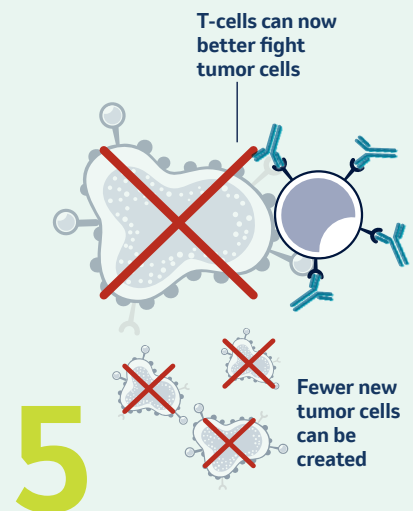
In some circumstances, cancer cells are able to exploit exactly this mechanism by also making these specific ligands. If they meet a T-cell, the ligand binds to the receptor and in this way deactivates the T-cell.



Pembrolizumab, the antibody, can prevent this deactivation by binding to the receptor on the T-cell and so blocking it.



The T-cells are now able to identify and destroy tumor cells again.



This is how the therapy may boost the body's immune response to cancer.

When should KEYTRUDA[®] not be used?



KEYTRUDA[®] should not be used if you have a known hypersensitivity or allergy to the active substance Pembrolizumab or other ingredients (L-histidine, L-histidine-hydrochloride-monohydrate, saccharose, polysorbate 80). Inform your attending doctor about all your allergies, so that he can identify a possible intolerance.

KEYTRUDA[®] should also not be used in the pediatric population under the age of 18, except in the pediatric population over the age of 3 with classic Hodgkin's lymphoma and in the pediatric population over the age of 12 with melanoma.

Before starting treatment with KEYTRUDA[®]

You should inform your doctor if you are using other medicines that weaken your immune system. Examples of these may include corticosteroids, such as prednisone. These medicines could impair the effect of KEYTRUDA[®]. However, your doctor may give you corticosteroids when you are already being treated with KEYTRUDA[®], in order to reduce any side effects that you may have. Before you receive KEYTRU-

DA[®] in combination with chemotherapy, corticosteroids may also be administered to you to prevent and/or treat nausea, vomiting and other side effects caused by chemotherapy.

Tell your doctor if you are using, have recently used or might use any other medicines.

In addition, it is important to inform your doctor if you:

have an autoimmune disease (a condition where the body attacks its own cells).

have pneumonia or other inflammation of your lungs (called pneumonitis).

were previously given ipilimumab (another active ingredient for treating certain types of cancer) and experienced severe side effects while on that medicine.

have had an allergic reaction after taking treatments containing other monoclonal antibodies.

have or have had a chronic viral infection of the liver, including Hepatitis B (HBV) or Hepatitis C (HCV).

have a human immunodeficiency virus (HIV) infection or acquired immune deficiency syndrome (AIDS).

have liver damage.

have kidney damage.

have had a solid organ transplant or a bone marrow transplant that used donor stem cells (allogeneic stem cell transplant).

are pregnant, think you may be pregnant or are planning to have a baby.

are breast-feeding or plan to breast-feed.



If you are a woman of childbearing potential, you must use reliable birth control while you are being treated with KEYTRUDA® and for at least four months after your last dose of the medicine.



What you should know about your treatment

1 How is KEYTRUDA® used?

KEYTRUDA® will be given to you in a hospital or outpatient clinic under the supervision of a doctor experienced in treating cancer.



For adults, the recommended dose of the medicine is either 200 mg every 3 weeks or 400 mg every 6 weeks.



The recommended dose of the medicine in the pediatric population over the age of 3 with classic Hodgkin's lymphoma, or in the pediatric population over the age of 12 with a melanoma, is 2mg/kg of body weight (up to a maximum of 200 mg) every 3 weeks.



The medicine will be administered as an approx. 30-minute infusion into a vein (intravenously). Your doctor will decide how many treatments you need.

Sometimes the tumor can get bigger for the first few months before it starts to shrink, or new tumors may occur. If your tumor seems to get worse at first after starting treatment with KEYTRUDA®, your doctor may continue your treatment if your health is stable, and will check again to see if you are responding to the treatment.



KEYTRUDA® can be administered in combination with other medicines to treat cancer. It is important that you also read the package leaflets for these other medicines. If you have any questions about the use of this medicine, ask your doctor.

It is important that you keep your appointments as arranged, so that your doctor can check the progress in your treatment.

If you are unable to keep an appointment, call your doctor right away to reschedule.

It is very important that you do not miss any KEYTRUDA® treatment. A break in your treatment may neutralize the effect of this medicine. Do not stop your treatment with KEYTRUDA® before first talking to your doctor.

2 Possible side effects

Like all medicines, KEYTRUDA® can cause side effects, although not everybody gets them. When you get this medicine, you may get some serious side effects. Side effects can sometimes be life-threatening and lead to death. These side effects can occur at any time during treatment or even after your treatment has stopped. You may even suffer more than one side effect at the same time. It is very important that you tell your doctor about any signs of illness you experience during treatment. Your doctor may give you other medicines in order to prevent more serious complications and relieve your symptoms. Your doctor may delay the next dose of the medicine or stop your treatment. Under certain conditions, therapy with KEYTRUDA® may be resumed within 12 weeks of the last dose. Your doctor will inform you about this.

Tell your doctor right away if you notice any of the following signs or other complaints:

Side effects	Signs or symptoms
Lung problems (inflammation of the lungs)	<ul style="list-style-type: none">• Shortness of breath• Chest pain• Cough
Intestinal problems (inflammation of the intestine)	<ul style="list-style-type: none">• Diarrhea, more bowel movements than usual• Black, tarry, sticky stools or stools with blood or mucus• Severe stomach pain or tenderness• Nausea or vomiting

Side effects	Signs or symptoms
Liver problems (inflammation of the liver)	<ul style="list-style-type: none"> • Nausea or vomiting • Feeling less hungry • Abdominal or stomach pain on the right • Yellowing of the skin or whites of the eyes • Dark colored urine • You bleed or bruise easily
Kidney problems (inflammation of the kidneys)	<ul style="list-style-type: none"> • Changes in the amount or color of your urine
Endocrine problems (Endocrine gland inflammations, particularly the thyroid, pituitary, or adrenal glands)	<ul style="list-style-type: none"> • Rapid heartbeat • Weight loss or weight gain • Increased sweating • Hair loss • Feeling cold • Constipation • Deeper voice • Muscle aches • Dizziness or fainting • Headaches that will not go away or unusual headaches
Type 1 diabetes including diabetic ketoacidosis (hyperacidity of the blood caused by diabetes)	<ul style="list-style-type: none"> • Increased hunger or thirst • Need to urinate more frequently • Weight loss • Feeling tired or nauseous • Stomach pain • Accelerated and deepened breathing • Confusion • Unusual sleepiness • Sweet-smelling breath • A sweet or metallic taste in the mouth • Your urine or sweat smells different



Note: You can find a list of side effects reported in KEYTRUDA® treatment in the package leaflet.

Problems in other organs

Side effects	Signs or symptoms
Eye inflammation (uveitis)	<ul style="list-style-type: none">• Visual disturbances
Inflammation of the muscles (myositis)	<ul style="list-style-type: none">• Muscle pain or weak muscles
Heart muscle inflammation (myocarditis)	<ul style="list-style-type: none">• Shortness of breath, irregular heartbeat, feeling tired or chest pain
Inflammation of the pancreas (pancreatitis)	<ul style="list-style-type: none">• Stomach pain, nausea and vomiting
Skin inflammations	<ul style="list-style-type: none">• Rash, pruritis, blistering, peeling or wounds to the skin and/or mouth ulcers or mucous membrane ulcers in the nose, throat or genital area
Immune system disorder (sarcoidosis)	<ul style="list-style-type: none">• May affect the lungs, skin, eyes and/or the lymph nodes
Brain inflammation (encephalitis)	<ul style="list-style-type: none">• Confusion, fever, impaired memory or seizures
Vascular inflammation (vasculitis)	<ul style="list-style-type: none">• Joint pain, fever, night sweats and weight loss
Spinal cord inflammation (myelitis)	<ul style="list-style-type: none">• Pain, feelings of numbness, tingling or weakness in the arms or legs; bladder or bowel problems including the need to urinate more frequently, weak bladder (urinary incontinence), difficulties urinating and constipation
Bladder inflammation (non-infectious cystitis)	<ul style="list-style-type: none">• Frequent and/or painful urination, defecation, blood in the urine, pain or pressure in the lower abdomen
Inflammation and scarring of the biliary tract (sclerosing cholangitis)	<ul style="list-style-type: none">• Pain on the right of the upper abdomen/ stomach, swelling of the liver or spleen, exhaustion/fatigue, pruritis or yellowing of the skin or eyeballs

Side effects	Signs or symptoms
Inflammation of the stomach mucous membranes (gastritis)	<ul style="list-style-type: none"> • Nausea, vomiting, upper abdominal pain, feeling full, loss of appetite or bad breath
Joint inflammations (arthritis)	<ul style="list-style-type: none"> • Pain, swelling, hyperthermia and restricted movement in the affected joints at rest, reddening, fever
Inflammation of the nerves (Guillain-Barré syndrome)	<ul style="list-style-type: none"> • Muscle weakness to paralysis
Impaired muscle signal between muscles and nerves (myasthenia syndrome)	<ul style="list-style-type: none"> • Muscle weakness
Anemia (hemolytic anemia)	<ul style="list-style-type: none"> • Paleness, exhaustion, dizziness, skin yellowing
Reduced parathyroid gland function (Hypoparathyroidism)	<ul style="list-style-type: none"> • Muscle cramps or spasms, exhaustion/fatigue and feeling weak
Reactions to the infusion	<ul style="list-style-type: none"> • Shortness of breath • Pruritis or rash • Dizziness or fever

Complications including graft-versus-host disease (GvHD) in patients with bone marrow transplants with donor stem cells (allogeneic stem cell transplant)

This may include severe complications that could result in death. They may occur if you had such a transplant in the past or if one is conducted in the future. Your doctor will

monitor you for signs and symptoms, such as a skin rash, liver inflammation, abdominal pain or diarrhea.



If you notice any side effects, including any not listed here, contact your doctor.

Noticing and recognizing symptoms and signs of illness is important

If you notice any symptoms while on KEYTRUDA® (Pembrolizumab), you should talk to your doctor right away. Please note that side effects may still occur even after you have taken the last dose of the medicine. Even though not every sign of illness is necessarily connected to use of the medicine, give your doctor the opportunity to identify side effects by informing him. Your help is crucial.

Your doctor may give you other medicines to prevent more serious complications and to relieve your symptoms. Your doctor may delay the next dose of the medicine or stop your treatment.

After your doctor has stopped treatment due to side effects, therapy can re-start within 12 weeks of the last dose of KEYTRUDA® once the side effects have subsided.

During your treatment with KEYTRUDA®, your doctor may give you corticosteroids (“cortisone”) to reduce any side effects that you may have. Before you receive the med-

icine in combination with chemotherapy, corticosteroids may also be administered to you to prevent and/or treat nausea, vomiting and other side effects caused by chemotherapy.

If you get any side effects, talk to your doctor immediately. This includes any possible side effects not listed in this booklet or the package leaflet.

Do not attempt to diagnose or treat side effects yourself.

A break in your treatment may neutralize the effect of this medicine. Do not stop your treatment with KEYTRUDA® before first talking to your doctor. If you have any further questions about the use of this medicine, ask your doctor.

If you miss a treatment with the medicine, contact your doctor immediately in order to catch up on the missed treatment. It is very important that you do not miss any treatment with this medicine.



What to do if symptoms occur when you are away from home

It is important that you contact your doctor whenever symptoms occur. **You should always carry your KEYTRUDA® Patient Alert Card** containing your doctor's contact information, so that he can then be contacted in an emergency.

The Patient Alert Card contains important information about signs of illness and symptoms that need to be reported immediately to the doctor or nurse treating you while you are away from home. It also alerts other doctors that you are being treated with KEYTRUDA®.



Please contact your doctor if you have any questions about KEYTRUDA® or how it works.

Pregnancy and lactation



If you are pregnant, think you may be pregnant, plan to become pregnant or became pregnant while on KEYTRUDA® therapy, inform your attending doctor immediately. The medication could harm your unborn baby or cause its death. Women of childbearing potential should use a reliable method of birth control while in therapy and for at least four months after the last dose of the medicine.

If you are breast-feeding or plan to breast-feed, talk to your doctor. You must not breast-feed while using KEYTRUDA®. It is

not known whether the medicine can pass into human milk.

Driving and using machines

KEYTRUDA® has a minor influence on the ability to drive or use machines. Dizziness, fatigue or feelings of weakness are possible side effects of the medicine. After the med-

icine has been administered, do not drive any vehicle or use any machines until you are sure that you feel well.

What else can you do to assist your therapy?

Theoretically it must be said that everything that boosts your well-being also contributes to the therapy. A healthy lifestyle with a balanced diet, sufficient exercise and fresh air, no nicotine and no alcohol are, for example, measures you could use to fortify yourself mentally and physically for the treatment.



A varied, nutritious diet that will supply your body with enough of the necessary nutrients is recommended. This also includes the intake of sufficient fluids. There is no special 'cancer diet'. In specific situations, however, adjustments to your diet may be necessary, such as for example during chemotherapy, after certain operations or if you have a weakened immune system.

German Cancer Aid [Deutsche Krebshilfe] has published a booklet on "Diet when you have cancer – Blue Guide 46". You can obtain this from your doctor, download from the internet* or order directly from German Cancer Aid. The leaflet gives plenty of practical tips for particular situations.

It has been scientifically proven that exercise and sport are beneficial to the course of the disease. Too much rest, by contrast, may result in co-morbidities such as weakening of the musculoskeletal and cardiovascular systems. If you cannot do any sport right now due to your disease or your treatment, you do not need to feel bad about this. Just take a nice walk, alone or with your dog, or go out for a short spin on your bike. As soon as you notice that you are stronger again, you can increase your activities. But discuss this with your doctor first. Your doctor can give you information about your physical fitness and ability to do sports and may create a personalized sports program with you.



General dietary recommendations

- *Divide your daily food requirement between at least five mealtimes.*
 - *Eat in peace, and slowly, and chew your food well.*
 - *Make sure that your meals and drinks are not too hot and not too cold.*
 - *Avoid foods that you cannot tolerate.*
 - *Make sure your diet is varied, to ensure your nutrient supply.*
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* https://www.krebshilfe.de/infomaterial/Blaue_Ratgeber/Ernaehrung-bei-Krebs_BlaueRatgeber_DeutscheKrebshilfe.pdf



German Cancer Aid also has a leaflet on the subject of sports and exercise: “Exercise and sports with cancer – Blue Guide 48”, with detailed information and exercise recommendations for different types of cancer.**

In addition to conventional medicine, some patients like to consider treatments in complementary and alternative medicine. Complementary forms of treatment are part of scientific medicine. They can be used additionally, in coordination with conventional cancer therapies.



Alternative therapies or products are generally medically controversial, and their efficacy is not usually scientifically proven. It is important that you inform your attending doctor before starting such a therapy.

** https://www.krebshilfe.de/infomaterial/Blaue_Ratgeber/Bewegung-und-Sport-bei-Krebs_BlaueRatgeber_DeutscheKrebshilfe.pdf

Who can you talk to about your disease?

A cancer diagnosis raises many questions for those affected. Your attending doctor will discuss and clarify any medical issues with you. If you have questions about coping with your disease or daily life, a psycho-oncological consultation can be helpful. Psycho-oncology is a part of oncology and is sometimes also called “psychosocial oncology”. Doctors, psychotherapists, psychologists, social workers, educators, art therapy representatives, carers, physiotherapists, occupational therapists and pastoral workers work together here. They will advise you on day-to-day matters,

inform you about benefits and offer help for psychological problems such as depression or anxiety. A psycho-oncological consultation is possible both as an inpatient and an outpatient. For example, there are services in hospitals, convalescent centers, cancer advisory centers or specialized oncology practices. Your doctor can help you to find a suitable place to go. You can also find further information on these matters and contact addresses in the German “Psycho-oncology”^{**} patient guidelines.





Whatever your questions are, whatever issues concern you or stress you, please be aware:

You do not need to face your problems alone!

Many patients benefit from exchanging stories about their disease with others affected. Self-help groups provide a knowledgeable platform for those affected and their family members. Your attending doctor may assist you in looking for a self-help group near you.

People with cancer may be entitled to special benefits, such as sick pay, pensions, support under the Severe Disability Act or indeed the costs of treatment, convalescence and care at home. German Cancer Aid has published a booklet on this subject called "A Guide to Social Benefits".** However, you can also directly contact social



services advisory points, which are available in many hospitals and centers, or health insurers, pension insurance providers, social associations, social welfare offices, relief organizations and employment agencies.

* https://www.krebshilfe.de/infomaterial/Patientenleitlinien/Psychoonkologie_Patientenleitlinie_DeutscheKrebshilfe.pdf

** https://www.krebshilfe.de/infomaterial/Blaue_Ratgeber/Wegweiser-zu-Sozialleistungen_BlaueRatgeber_DeutscheKrebshilfe.pdf

Additional information



You can find further information on types of cancer, how they are treated, examinations and daily life with cancer on the website of the cancer information service at the German Cancer Research Center in the Helmholtz Association (dkfz):

www.krebsinformationsdienst.de



You can find information on your entitlement to benefits, such as sick pay, pensions or convalescence costs in the booklet "A Guide to Benefits":

www.krebshilfe.de/fileadmin/Downloads/PDFs/Blaue_Ratgeber/040_0048.pdf

You can obtain impartial, independent information on diagnoses, treatment and aftercare for cancer from the staff of the CANCER INFORMATION NETWORK at German Cancer Aid:

<https://www.infonetz-krebs.de/>



You can find more detailed information on immunotherapy and the mechanism of action of KEYTRUDA® on

www.msd-gesundheit.de/immunonkologie/therapie/

Reporting of side effects

You can report side effects directly to MSD or to the PEI:

MSD Sharp & Dohme GmbH

Drug Safety Department
Levelingstr. 4a, 81673 Munich
Fax + 49 89 45 61 - 1352
E-Mail arzneimittelsicherheit@msd.de

Paul-Ehrlich-Institut

Paul-Ehrlich-Str. 51-59, 63225 Langen
Tel. +49 6103 77 0
Fax +49 6103 77 1234
www.pei.de

By reporting side effects, you can help provide more information on the safety of this medicine.



*Bei dieser Information handelt es sich um eine
nichtamtliche Übersetzung der beauftragten
deutschsprachigen Unterlagen durch ein
zertifiziertes Übersetzungsbüro.*

*This information is a non-official translation
of the circulated German-language
documentation carried out by a certified
translation office.*

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