Nivolumab-AVD

for Haematological malignancy

Regimen schedule

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Nivolumab	X														X						
Doxorubicin	X														X						
Vinblastin	X														X						
Dakarbazin	X														X						
Filgrastim					X	X	X	X	X										X	X	X

Next course of treatment, day 29

Day	22	23	24	25	26	27	28
Nivolumab							
Doxorubicin							
Vinblastin							
Dakarbazin							
Filgrastim	X	X					

About your treatment

Nivolumab is an antibody that activates your immune system to attack cancer cells. Dakarbazine, doxorubicin and vinblastine are cytostatic drugs. It also contains filgrastim, which stimulates the bone marrow to produce white blood cells and strengthens your immune system.

Each course is 28 days. On days 1 and 15, you will be given an IV. After that, there is a break of 13 days, before a new course starts.

Filgrastim is administered via a syringe every day for 5 days, starting on days 5 and 19. You can take the shots yourself. Alternatively, a special form of filgrastim is used, which is then given at only one time.

During treatment, your blood tests and any side effects will be monitored

Side effects - symptoms and tips

When receiving immunotherapy (antibodies that activate your immune system), there is a risk of serious side effects.

The side effects that can occur are autoimmune reactions/inflammation in the body's various organs. The side effects are often mild and transient but can become serious. It is important that the side effects are detected early so that they can be followed up and treated if necessary.

The side effects can occur at any time during treatment but also several months after treatment has ended.

Signs of side effects can also be detected through blood tests. You may provide blood tests during treatment and after treatment has ended.

It is important that you contact your clinic if you experience any of the following symptoms:

• New or changed dry cough and shortness of breath. May be a side effect in the lungs, pneumonitis

• Increased number of stools, new diarrhea possibly accompanied by stomach pain, blood in the stool or black stools. May be a side effect in the intestines, colitis

• Dark-colored urine, foamy urine or very cloudy urine. May be a side effect in the kidneys, nephritis

• Headache, unusually tiredness and weakness, impaired consciousness, pain behind the eyes, visual disturbances, confusion and new depression. May be a side effect in hormone-producing glands such as the thyroid or pituitary gland

• Redness and rash on the skin, often with itching. Wetting sores and blistering are a serious sign. May be a side effect in the skin, dermatitis

• New pain, swelling and stiffness in muscles and joints, May be myositis and arthritis

• Impaired strength and sensation in the arms and legs. May be a side effect in the nervous system, neuritis

• Chest pain, irregular pulse and palpitations. May be signs of inflammation of the heart muscle, myocarditis

Side effects

Fatigue

In connection with cancer and treatment, it is common to feel tired. It is individual how severe the discomfort you experience and how long it lasts. You may be tired for a long time after a treatment has ended. Your ability to remember, concentrate and solve problems may become worse. **In very severe cases of fatigue, memory and concentration problems can be symptoms of a serious side effect caused by the immunotherapy treatment.** Tip: Feel free to move. Physical activity often helps against fatigue. Find a balance between activity, rest and sleep that works for you.

Problems with stomach and intestines

Diarrhoea is common. You may also become constipated.

Tip: Drink a lot, a few glasses more than usual per day. If you have diarrhoea, avoid fatty, spicy and high-fibre foods. If you're constipated, try high-fibre foods and exercise. Talk to your doctor if you get diarrhoea or constipation - you may need medication.

Nausea and taste changes

There is a risk that the treatment will make you feel unwell. If necessary, you will be given anti-nausea medication.

Tips: Sometimes it feels better to eat lighter food and small portions. For example, try skim milk, yoghurt, omelettes, sandwiches and hot or cold soups. Drinking a little extra between meals can reduce nausea.

Hair loss

Usually you will lose your hair 2-4 weeks after the first treatment. The hair will start to grow back about 3-4 weeks after you have finished all the cytostatic treatment. Sometimes the hair colour changes, and straight hair can become curly. But over time, the hair usually returns to its former state. Sometimes, you may even lose eyebrows and eyelashes, but they also grow back.

Skin problems

You may experience itching and a rash.

Tip: When washing your skin, be gentle and use mild soap. Lubricate with moisturiser.

Infection susceptibility

You will be susceptible to infection after treatment. This is because the level of white blood cells drops. Before each treatment, blood samples are taken to see if the blood cells have recovered. If the values are too low, the treatment must be postponed.

Tips: Try to avoid close contact with people who have a cold or stomach illness, for example. Wash your hands often with soap and water. Hand sanitizer can be useful.

Problems with mouth and mucous membranes

The mucous membranes of your nose, mouth, eyes and abdomen may be affected by your treatment. For example, you may have nosebleeds and a runny nose. In the mouth, you may experience dryness, redness, burning and sores. You can also get fungus, which turns the lining of your mouth red or gives it a white coating. Eyes may become dry and watery. The mucous membranes in the lower abdomen can also become dry.

Tip: If you have a dry mouth, use saliva stimulants available in pharmacies. Rinsing your mouth with Vichy water can prevent fungus. Be attentive to oral hygiene, and use a soft toothbrush and mild toothpaste. Be careful with floss and toothpicks. Inform your dentist of your cancer treatment when you visit. Avoid contact lenses if you have eye problems. Women can use oestrogen cream, emollient cream or oil to treat dry mucous membranes in the lower abdomen.

Numbness and tingling - sensory disturbances

You may experience numbness and tingling in your hands and feet, and your fine motor skills may become worse. For example, you may have difficulty buttoning buttons or walking. The symptoms usually go away, but not completely in everyone. Tell your doctor or nurse if you have numbness or tingling in your hands and feet. Physical activity can prevent neuropathy and can relieve symptoms and improve motor skills and balance. Try to find the exercise that suits you. Cardio and strength training can be good for preventive purposes. If neuropathy has occurred, improved muscle strength, balance training and yoga can also have an effect by affecting function for the better.

Pain in muscles and bones

Pain, tenderness and weakness in the muscles are common.

Tips: Can be relieved with common painkillers.

Urine

The urine may turn red after the first day of treatment.

Contact your clinic immediately at:

Acute

- Call 112 in case of persistent acute chest pain, pressure on the chest or difficulty breathing/shortness of breath

Contact your reception immediately at:

- • Fever (temp above 38 degrees) or at a temperature below 36 degrees
- • Sudden deterioration regardless of symptoms
- • Urinary tract infection symptoms or cold symptoms before treatment
- • Severe nausea or burning in the mouth that makes it difficult for you to eat and drink
- • Nosebleeds or other bleeding you cannot stop or bruising over large parts of the body
- • Increased number of stools/diarrhea with or without stomach pain, bloody or black stools
- • New onset dry cough and shortness of breath
- • Severe itching, blisters, oozing sores and peeling skin.
- • If you or your relatives feel that you are changed, confused or that consciousness is affected.
- • Headache, unusual fatigue, pain behind the eyes and visual disturbances.

Common advice

Cancer drugs are usually excreted in the urine up to 7 days after treatment. Therefore, you should avoid splashing urine. Sit down when you pee. When finished, close the toilet lid and flush 2 times. It is important not to get pregnant or make someone pregnant while you are being treated with cancer drugs, as the drugs can affect the foetus. Therefore, use safe contraceptives. Sometimes double protection is needed, as side effects such as diarrhoea or the direct effect of cancer drugs may mean that the contraceptive pill is not enough protection on its own. If you are a man, use a condom during sexual intercourse within 72 hours of treatment, as cytostatic drugs are also excreted through the seminal fluid.

General information about cancer

Useful information about cancer is available from both 1177 Vårdguiden and Cancerfonden:

www.1177.se

www.cancerfonden.se