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EVEROLIMUS



(5mg & 10mg)

Read all of this leaflet carefully before you start taking this medicine.

- Keep this leaflet. You may need to read it again.
- If you have further question, ask your doctor or your pharmacist.
- This medicine has been prescribed for you. Do not pass it on to others. It may harm them, even if their symptoms are the same as yours.

In this leaflet:

- What Everolimus is and what it is used for
- Before you take Everolimus
- How to take Everolimus
- Possible side effects
- Storing Everolimus
- Further information

1- What Everolimus is and what it is used for

Everolimus, an inhibitor of mechanistic target of rapamycin (mTOR), is an antineoplastic agent and a macrodile immunosuppressant. Everolimus is used to treat: (fact 3859)
Advanced hormone receptor-positive, human epidermal growth receptor 2-negative breast cancer: Treatment of postmenopausal women with advanced hormone receptor-positive, human epidermal growth factor receptor 2 (HER2)-negative breast cancer in combination with exemestane after failure of treatment with letrozole or anastrozole.

Advanced neuroendocrine tumors of pancreatic origin:

Treatment of progressive neuroendocrine tumors of pancreatic origin in adult patients with unresectable, locally advanced, or metastatic disease.

Limitations of use – Not indicated for the treatment of patients with functional carcinoid tumors.

Advanced renal cell carcinoma: Treatment of adult patients with advanced renal cell carcinoma after failure of treatment with Sunitinib or Sorafenib.

Renal angiomyolipoma with tuberous sclerosis complex:

Treatment of adult patients with renal angiomyolipoma and tuberous sclerosis complex not requiring immediate surgery.

Subependymal giant cell astrocytoma:

Treatment of adult and pediatric patients with subependymal giant cell astrocytoma associated with tuberous sclerosis complex who require therapeutic intervention but are not candidates for curative surgical resection.

Off-label uses:

Carcinoid tumors, progressive, advanced – Data from a randomized, double-blind, placebo-controlled phase III trial in patients with low grade or intermediate-grade neuroendocrine tumors associated with carcinoid syndrome support the use of everolimus (in combination with octreotide long-acting repeatable) for this condition.

Waldenstrom macroglobulinemia, relapsed or refractory –

Data from phase II trial in patients with relapsed/refractory Waldenstrom macroglobulinemia support the use of everolimus for this condition. Additional trials may be necessary to further define the role of everolimus in this condition. (Fact 3857)

2- Before you take Everolimus

Do not take Everolimus:

If you are allergic (hypersensitive) to the active ingredient and any other ingredient in Everolimus, sirolimus, other rapamycin derivatives products. (Fact 3860)

If you are pregnant or think that you might be pregnant.

If you are breast feeding. (Fact 3860)

Pediatric: The safety and effectiveness of everolimus in kidney or liver transplant, advanced renal cell carcinoma, advanced pancreatic neuroendocrine tumors, or renal angiomyolipoma with tuberous sclerosis complex in the absence of subependymal giant cell astrocytoma in patients younger than 18 years have not been established. Everolimus has not been studied in patients younger than 1 year with subependymal giant cell astrocytoma. (Fact 3861)

Elderly: No overall differences in safety or effectiveness were observed between these elderly patients and younger patients. (FDA leaflet)

Take special care with Everolimus:

Pulmonary toxicity:

Noninfectious pneumonitis was reported in up to 19% of patients treated with Everolimus. The incidence of grade 3 and 4 noninfectious pneumonitis was up to 4% and up to 0.2%, respectively. Interstitial lung disease and/or noninfectious fibrosis have been observed with Everolimus. Fatal outcomes have been observed. Noninfectious pneumonitis may respond to drug interruption with or without glucocorticoid therapy. However, fatal cases have also occurred. Pneumonia should be considered in the differential diagnosis, advise patients to promptly report any new or worsening respiratory symptoms.

Infections:

Everolimus has immunosuppressive properties and may predispose patients to bacterial, fungal, viral, or protozoal infections, including infections with opportunistic pathogens. Localized and systemic infections, including pneumonia, mycobacterial infections, other bacterial infections, viral infections (including reactivation of hepatitis B virus), and invasive fungal infections, such as aspergillosis, candidiasis, or P. jiroveci pneumonia, have occurred in patients taking everolimus. Some of these infections have been severe (eg, leading to sepsis or respiratory or hepatic failure) or fatal. Complete treatment of preexisting invasive fungal infections prior to starting treatment with everolimus. Be aware, and ensure that patients are aware, of the increased risk of infection with everolimus; be vigilant for signs and symptoms of infection. If a diagnosis of an infection is made, institute appropriate treatment promptly and consider interruption or discontinuation of everolimus. If a diagnosis of invasive systemic fungal infection is made, discontinue everolimus and treat with appropriate antifungal therapy. Because of the danger of over-immunosuppression of the immune system, this can cause increased susceptibility to infection, use combination immunosuppressive therapy with caution.

Oral ulceration:

Mouth ulcers, stomatitis, and oral mucositis have occurred in patients treated with everolimus at an incidence from 44% to 86%. Grade 3 and 4 stomatitis was reported in 4% to 9% of patients. In such cases, topical treatments are recommended, but avoid alcohol, hydrogen peroxide, iodine, or thyme-containing mouthwashes because they may exacerbate the condition. Do not use antifungal agents unless fungal infection has been diagnosed.

Renal effects:

Elevations of serum creatinine have been reported. Cases of renal failure (including acute renal failure), some with a fatal outcome have been observed.

In kidney transplant patients, everolimus with standard-dose cyclosporine increases the risk of nephrotoxicity, resulting in a lower glomerular filtration rate. Reduced doses of cyclosporine are required for use in combination with everolimus in order to reduce renal dysfunction. Monitor renal function during the administration of everolimus in combination with cyclosporine. Consider switching to other immunosuppressive therapies if renal function does not improve after dose adjustments or if the dysfunction is thought to be drug related. Exercise caution when using other drugs that are known to impair renal function.

In liver transplant recipients, everolimus has not been studied with standard-dose Tacrolimus. Use reduced doses of Tacrolimus in combination with everolimus in order to minimize the potential risk of nephrotoxicity. Proteinuria has been reported. The use of everolimus with cyclosporine in transplant patients has been associated with increased proteinuria. The risk of Proteinuria increased with higher everolimus whole blood trough concentrations.

Monitor renal function (serum urea nitrogen (BUN); serum creatinine, urinary protein) at baseline and periodically, especially if risk factors for further impairment exist.

Eliminating calcineurin inhibitors from the immunosuppressive regimen may result in acute rejection.

Vaccines (inactivated): Immunosuppressants may diminish the therapeutic effect of vaccines. Vaccines may develop. Immunosuppressants may diminish the therapeutic effect of vaccines (Live).

Management: Avoid use of live organism vaccines with immunosuppressants; live-attenuated vaccines should not be given for at least 3 months after immunosuppressants. Avoid combination. Lymphomas and other malignancies:

Patients receiving everolimus are at an increased risk of developing lymphomas and other malignancies, particularly of the skin. The risk appears to be related to the intensity and duration of immunosuppression rather than to the use of any specific agent.

As usual for patients with increased risk of skin cancer, advise patients to limit exposure to sunlight and ultraviolet light by wearing protective clothing and using a sunscreen with a high protection factor.

Kidney graft thrombosis:

An increased risk of kidney arterial and venous thrombosis, resulting in graft loss, was reported, mostly within the first 30 days post transplantation.

Hepatic artery thrombosis:

mTOR inhibitors are associated with an increase in hepatic artery thrombosis. Reported cases mostly have occurred within the first 30 days post-transplant and most also lead to graft loss or death. Therefore, do not administer everolimus earlier than 30 days after liver transplant.

Heart transplantation:

Increased mortality, often associated with serious infection, within the first 3 months of post transplantation was observed in a clinical trial of de novo heart transplant patients receiving immunosuppressive regimens with or without induction therapy. Use in heart transplantation is not recommended.

Angioedema:

Everolimus has been associated with the development of angioedema. Concomitant use with other agents known to cause angioedema (eg, ACE inhibitors) may increase the risk for angioedema. Wound healing and fluid accumulation:

Everolimus delays wound healing and increases the occurrence of wound-related complications, such as wound dehiscence, wound infection, incisional hernia, lymphocle, and seroma. These wound-related complications may require more surgical intervention. Use everolimus with caution in the surgical period. Generalized fluid accumulation, including peripheral edema (eg, lymphedema) and other types of localized fluid collection, such as pericardial and pleural effusions and ascites, have also been reported.

Hyperlipidemia:

Increased serum cholesterol and triglycerides requiring the need for antilipid therapy have been reported to occur following initiation of everolimus; the risk of hyperlipidemia is increased with higher everolimus whole blood trough concentrations. Use of antilipid therapy may not normalize lipid levels in patients receiving everolimus.

Monitor for hyperlipidemia and treat appropriately. If possible, achieve optimal lipid control prior to initiating everolimus therapy. Consider the risks and benefits in patients with established hyperlipidemia before initiating an immunosuppressive regimen containing everolimus. Similarly, reevaluate the risks and benefits of continued everolimus therapy in patients with severe refractory hyperlipidemia. Everolimus has not been studied in patients with baseline cholesterol levels greater than 350 mg/dL.

Because of an interaction with cyclosporine, clinical trials of everolimus and cyclosporine in kidney transplant patients strongly discouraged patients from receiving the HMG-CoA reductase inhibitors simvastatin and lovastatin.

Diabetes:

Increases in serum glucose are common; may alter insulin and/or oral hypoglycemic therapy requirements in patients with diabetes. Everolimus has been shown to increase the risk of new-onset diabetes mellitus after transplant. Monitor blood glucose concentrations in patients using everolimus, especially when coadministered with other medications known to induce hyperglycemia. If possible, achieve optimal glycemic control prior to initiating everolimus therapy.

Hematologic effects:

Decreased hemoglobin, lymphocytes, neutrophils, and platelets have been reported in clinical trials. Monitor complete blood cell counts prior to the start of everolimus therapy and periodically thereafter.

The concomitant use of everolimus with cyclosporine may increase the risk of thrombotic microangiopathy/thrombotic thrombocytopenic purpura/hemolytic uremic syndrome.

Infertility:

Everolimus may cause infertility. In females, menstrual irregularities, secondary amenorrhea, and increases in luteinizing hormone and follicle-stimulating hormone have occurred. Azoospermia or oligospermia may be observed. Everolimus is an antiproliferative drug and affects rapidly dividing cells, such as the germ cells.

Galactose intolerance:

Do not administer everolimus to patients with rare hereditary problems of galactose intolerance, Lapp lactase deficiency, or glucose-galactose malabsorption because this may result in diarrhea and malabsorption.

Hazardous agent:

Use appropriate precautions for handling and disposal (NIOSH 2014 [group 1]).

Use in pregnancy: Category D.

Adverse events were observed in animal reproduction studies with exposures lower than expected with human doses. Based on the mechanism of action, may cause fetal harm if administered during pregnancy.

Advise women of reproductive potential to avoid pregnancy and use highly effective birth control during treatment and for up to 8 weeks after everolimus discontinuation.

Use in lactation:

It is not known if everolimus is excreted in breast milk. Because of the potential for serious adverse reactions in the breast feeding infant, avoid breast feeding. (Fact 3861)

Laboratory test during the medication therapy:

Monitor renal function, including measurement of serum urea nitrogen, serum creatinine, and urinary protein; fasting serum glucose; complete blood cell count; and lipids, prior to the start of therapy and periodically thereafter. Monitor renal function, particularly when patients have additional risk factors that may further impair renal function. Monitoring of fasting serum glucose and lipid profile is recommended prior to the start of therapy and periodically thereafter, as well as management with appropriate medical therapy. More frequent monitoring is recommended when everolimus is coadministered with other drugs that may induce hyperglycemia. Monitor patients for proteinuria and signs and symptoms of infection. Monitor everolimus and cyclosporine whole blood trough concentrations.

Drug interactions:

If you received other drugs; even such as OTC drugs, please tell your physician or pharmacist. The following drug interactions and/or related problems have been selected on the basis of their potential clinical significance.

ACE inhibitors:

Increased risk of angioedema when everolimus given with ACE inhibitors.

Antibacterials

Plasma concentration of everolimus possibly increased by CLARITHROMYCIN, TELITHROMYCIN, manufacturer of everolimus advises avoid concomitant use; plasma concentration of everolimus increased by ERYTHROMYCIN (consider reducing the dose of everolimus); plasma concentration of everolimus reduced by RIFAMPICIN (avoid concomitant use or consider increasing the dose of everolimus).

Antidepressants

Plasma concentration of everolimus possibly reduced by ST JOHN'S WORT manufacturer of everolimus advises avoid concomitant use.

Antifungals

Plasma concentration of everolimus increased by KETOCONAZOLE manufacturer of ketoconazole advises avoid concomitant use; plasma concentration of everolimus possibly increased by ITRAZONAZOLE, POSACONAZOLE and VORICONAZOLE manufacturer of everolimus advises avoid concomitant use.

Antipsychotics

Plasma concentration of everolimus increased by CLOZAPINE (increased risk of agranulocytosis)

Antivirals

Plasma concentration of everolimus possibly increased by ATAZANAVIR, DARUNAVIR, INDINAVIR, and RITONAVIR and SAQUINAVIR manufacturer of everolimus advises avoid concomitant use.

Calcium-channel Blockers

Plasma concentration of both drugs may increase when everolimus given with VERAPAMIL (consider reducing the dose of everolimus)

Cyclosporine

Plasma concentration of everolimus increased by cyclosporine (consider reducing the dose of everolimus)

Cytotoxics

Plasma concentration of everolimus increased by IMATINIB (consider reducing the dose of everolimus)

Grapefruit Juice

Manufacturer of everolimus advises avoid concomitant use with grapefruit juice. (BNF 1223)

3- How to take Everolimus

Patient receiving Everolimus should be under the supervision of a physician experienced in cancer chemotherapy. Your doctor will decide about the dose, which will depend upon your height and body weight.

General dosing considerations:

Usual adult dose:

Advanced pancreatic neuroendocrine tumors/breast cancer/ renal angiomyolipoma/renal cell carcinoma-

Management: Avoid use of live organism vaccines with immunosuppressants; live-attenuated vaccines should not be given for at least 3 months after immunosuppressants. Avoid combination.

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