

## FAQ on the influenza vaccine for Healthcare Professionals looking after Patients with Cancer

### Who should be offered the seasonal influenza vaccine?

Influenza vaccination is strongly recommended annually for all cancer patients, their carers and members of their household, unless it is contraindicated for them. Healthcare workers should also receive the influenza vaccination, both for their own protection and for the protection of patients.

### Which seasonal influenza vaccine should adults and children receive?

Adults should receive the Quadrivalent Inactivated Influenza Vaccine (QIV) as an IM injection.

This year, for the first time, Live Attenuated Influenza Vaccine (LAIV) will be offered to all children aged 2-12 years old. This vaccine is given intra-nasally. LAIV contains a weakened vaccine virus that is also cold adapted so that it cannot cause the disease that it protects against. QIV should be given if LAIV is contraindicated, e.g. children with significant immunosuppression due to cancer treatment or if they have relatives in the same household undergoing immunosuppressive treatment such as haematopoietic stem cell transplantation.

### Who should NOT receive the seasonal influenza vaccine?

- Patients on combination checkpoint inhibitors (e.g. ipilimumab plus nivolumab) because of a potential association with immune-related adverse reactions.
- Patients with severe neutropenia (absolute neutrophil count  $<0.5 \times 10^9/L$ ) to avoid an acute vaccine-related febrile episode. Delay giving the vaccination until absolute neutrophil count has recovered or until after consultation with the patient's primary consultant.
- Anyone with a history of anaphylaxis following a previous dose of influenza vaccine or any of its constituents (other than ovalbumin).

Note: The quadrivalent influenza vaccine (QIV) is a low ovalbumin vaccine with an ovalbumin content of  $\leq 0.06$  micrograms per dose. People with confirmed egg

anaphylaxis or egg allergy can be given QIV with an ovalbumin content <0.1 mcg per dose in a primary care setting unless admitted to ICU after a previous anaphylaxis to egg. People who have required admission to critical care for a previous severe anaphylaxis to egg should be referred for specialist assessment with regard to vaccine administration in hospital.

### **Can patients on single agent immunotherapy (e.g. single agent immune checkpoint inhibitors) receive the influenza vaccine?**

Yes, provided that they do not have severe neutropenia as outlined above or any other contraindications. There are currently no international consensus statements on the use of influenza vaccines in people receiving immune checkpoint inhibitor treatment. Until further evidence emerges, the National Immunisation Advisory Committee recommends that patients on combination checkpoint inhibitors (e.g. ipilimumab plus nivolumab) should not receive any influenza vaccines, because of a potential association with immune-related adverse reactions. Patients on single agent combination checkpoint inhibitors can receive the influenza vaccine.

### **When should patients on chemotherapy and immunotherapy receive the influenza vaccine?**

Ideally, patients should receive the influenza vaccine at least two weeks before they start treatment with chemotherapy or immunotherapy. This may not always be possible.

For it to be effective it should ideally be given just before a cycle of chemotherapy or within a couple of days after finishing a cycle. For those who received the influenza vaccine while on chemotherapy, they should receive a second influenza vaccine dose, at least 4 weeks after the completion of chemotherapy if it is still within the same influenza season (October – April). There should be at least 4 weeks between the influenza vaccine doses. The vaccine may be given at any point during a course of radiotherapy.

### **Can children who are living with someone who is on chemotherapy for cancer or is on immunomodulatory therapy receive the live attenuated influenza vaccine?**

Children aged 2-18 living in the same household can receive the live attenuated influenza vaccine in the majority of cases. However, children who live with severely immunosuppressed persons requiring isolation (e.g. post haematopoietic stem cell transplant) should NOT receive the live attenuated influenza vaccine (LAIV). Children who are vaccinated with LAIV can "shed" very small amounts of the attenuated influenza virus for a few days after vaccination and there is a theoretical risk that someone with severe immune suppression could develop an infection from this attenuated virus. Inactivated influenza vaccine can be given to children aged 2-18 in these circumstances.

**Can patients with lymphoedema, or those who are at risk of lymphoedema, receive the influenza vaccine?**

Yes, but avoid having the vaccination in the affected limb.

**Can the pneumococcal vaccine be given at the same time as the influenza vaccine?**

Yes. The pneumococcal vaccine may be given at the same time as the influenza vaccine but at a different site. No interval is required if both vaccines are not given on the same day. See <https://www.hse.ie/eng/health/immunisation/hcpinfo/guidelines/chapter16.pdf> for more information on the schedule of pneumococcal vaccination for those with cancer and other conditions that put them at high risk of invasive pneumococcal disease.

**Where can I find more information?**

More detailed information on influenza vaccination from the National Immunisation Advisory Committee can be found at <https://www.hse.ie/eng/health/immunisation/hcpinfo/guidelines/chapter11.pdf>

Comprehensive FAQs on the influenza vaccine and pneumococcal vaccines are available at <https://www.hse.ie/eng/health/immunisation/pubinfo/flu-vaccination/faq.pdf>

Patient information on influenza vaccination is available in different languages at <https://www.hse.ie/eng/health/immunisation/infomaterials/translations/flu.html>

Information for healthcare workers on the administration of the influenza vaccine is available at <https://www.hse.ie/eng/health/immunisation/hcpinfo/fluinfor/>