Immunisation Advisory Centre

# Immunisation for adults post-haematopoietic stem cell transplant (HSCT)

These recommendations are for adults who have received either an autologous or allogeneic graft. If a patient receives a subsequent second HSCT, the patient should again be considered 'immunologically naïve' and the schedule should be re-started at the appropriate time after the second HSCT.
For children aged under 18 years, please refer to the National Child Cancer Network guide Immunisation of children during and after cancer therapy.

## From 6 months post-HSCT

- Starting non-live immunisations from 6 months is a pragmatic decision based on risk vs benefit, to minimise the period of vulnerability and allow for some immune response.
- The optimum timepoint for vaccination post-HSCT has not been established. An association between a longer time from HSCT and a greater response to vaccination has been shown. So there is a tradeoff between waiting for an enhanced immune response versus the ongoing risk of VPDs prior to reimmunisation.
- The association between helper T cells, cytotoxic T cell and B cell populations in the immune response to a range of vaccines post-HSCT is unclear.
- COVID-19, influenza, pneumococcal and herpes zoster vaccines should be prioritised.

| Vaccine | Notes | Recommended schedule | Eligibility |
|---|---|---|---|
| Influenza | • Annually, during the Influenza Immunisation Programme<br>• May start from 3 months post-HSCT in influenza season | • Administer two doses 4 weeks apart in the first year post-HSCT; both doses are funded<br>• In subsequent years, only one dose is required annually<br>• Adjuvanted vaccine is recommended for those over 65 – however, this is **unfunded** | FUNDED |
| SARS-CoV- 2 (COVID-19) | • Revaccination – can begin from 3 months post-HSCT† | • Administer vaccine doses following the recommended 2-dose primary course<br>• Additional doses of latest variant as per recommended schedule | FUNDED |
| *Haemophilus influenzae* type b Hib (Act-HIB) | • Revaccination following immunocompromise<br>• **Three doses are recommended <u>but</u>:**<br>  ○ One dose **is** funded<br>  ○ Two doses **are not** funded<br>• No Hib vaccines are available for purchase through Healthcare Logistics<br>• ProPharma-supplied Act-HIB must be used for doses two and three<br>• No Immunisation Benefit Subsidy can be claimed | • Administer three doses at 0, 1 and 6 months apart | FUNDED One dose<br>NOT FUNDED Two further doses |
| Hepatitis B (Engerix-B) | • Revaccination following immuncompromise<br>• Hepatitis B serology should be checked 4-8 weeks after the final dose | • Administer three doses at 0, 1 and 6 months apart | FUNDED |

*† Or earlier, on advice from the treating specialist*

| Vaccine | Notes | Recommended schedule | Eligibility |
|---|---|---|---|
| **Herpes zoster Recombinant rZV (Shingrix)** | • Revaccination from 18 years of age<br>• If a patient is two years post-HSCT and has already had their VV but have not received Shingrix since the HSCT, wait 12 months post-VV before administering two doses of Shingrix† | • Administer two doses at least 2–6 months apart | **FUNDED From 18 years of age** |
| **Human papillomavirus HPV (Gardasil 9)** | • Males and females 18–45 years of age inclusively | • Administer three doses at 0, 2 and 6 months apart | **FUNDED Up to 27 years of age** |
| **Meningococcal B 4CMenB (Bexsero)** | • Can be co-administered with any other vaccine | • Administer two doses 8 weeks apart<br>• If ongoing immunocompromise, consider booster after 5 years | **FUNDED** |
| **Meningococcal MenACYW (MenQuadfi)** | • Prescription required for any second primary dose | • Administer two doses at least 8 weeks apart<br>• If ongoing immunocompromise, consider booster after 5 years | **FUNDED** |
| **Pneumococcal PCV13 (Prevenar 13)** | • Pneumococcal disease is particularly important in this group and pneumococcal immunisations should be prioritised.<br>• If Pneumovax23 has been administered before Prevenar 13, wait one year to give Prevenar 13 | • From 6 months post-HSCT, administer 3 doses at 1-month intervals, then a booster 6 months after dose 3 Alternatively, for early protection as requested by a clinician/specialist, from 3 months post-HSCT, administer 3 doses at 2-month intervals, then a booster at 6 months after dose 3. | **FUNDED** |
| **Pneumococcal 23PPV (Pneumovax23)** | • Administer Pneumovax23 a minimum of 8 weeks after fourth dose of Prevenar 13 | **If aged 18 years to under 60 years:**<br>• Administer one dose<br>• Schedule a precall for the second dose in 5 years<br>• Schedule a precall for the third/final dose 5 years after second dose or at age 65 years, whichever is later<br>**If aged 60 years or older:**<br>• Administer one dose<br>• Schedule a precall for the second/final dose in 5 years | **FUNDED** |
| **Polio IPV (IPOL)** | • Revaccination following immunocompromise<br>• Infanrix-IPV is funded post-HSCT, so may be used to reduce the number of injections | • Administer three doses at 0, 1 and 6 months apart | **FUNDED** |
| **RSV** | • From age 50 years. **Note: Not funded** | • Administer 1 dose from 3-6 months post-HSCT (prior to start of RSV season), and second dose the following year | **NOT FUNDED** |
| **Tetanus/diphtheria/ pertussis Tdap (Boostrix)** | • Revaccination following immunocompromise<br>• Infanrix IPV is funded for up to 4 doses post-HSCT, so may be used to reduce the number of doses | • Administer three doses at 0, 1 and 6 months apart | **FUNDED** |

*† Or earlier, on advice from the treating specialist*

**From 24 months post-HSCT**

- Live immunisations should generally be deferred to 24 months, although in certain situations such as during an outbreak earlier administration may be considered in those with no GvHD.

| Vaccine | Notes | Recommended schedule | Eligibility |
| --- | --- | --- | --- |
| **Measles/mumps/ rubella MMR (Priorix)** | • Revaccination | • If immunocompetent administer two doses, at least 4 weeks apart [a, b, c, d, f] | **FUNDED for immunocompetent individuals who meet eligibility criteria.**<br><br>**CONTRAINDICATED for individuals with extensive graft vs host disease or on significantly immunosuppressive medication** |
| **Varicella (chickenpox) VV (Varilrix)** | • Revaccination<br>• When an HSCT patient has completed their Shingrix vaccination plan and is 24 months post-HSCT complete VZV serology. If negative serology and immunocompetent, administer two doses of VV at least 4 weeks apart [e] | • If immunocompetent administer two doses, at least 4 weeks apart [a, b, c, d, f] | |

a. Not routinely recommended for individuals with extensive graft vs host disease or on significantly immunosuppressive medication.
b. Individuals who have received immunoglobulin or other blood products may require time for passive antibodies to decrease prior to administration of live varicella and MMR vaccines. Refer to Table A6.1 in IHB.
c. Two or more live vaccines can be given at the same visit. However, when live vaccines are administered at different visits, a minimum interval of 4 weeks is required.
d. Consider normal immunoglobulin or zoster immunoglobulin for post-exposure measles or varicella prophylaxis respectively in non-immune individuals.
e. Two doses of varicella vaccines are funded for a household contact of an individual who is severely immunocompromised or undergoing a procedure leading to immunocompromise, where the household contact has no clinical history of varicella infection or immunisation.
f. Contact the primary specialist to consider administration of normal immunoglobulin if a live vaccine is given in error.

## Call 0800 IMMUNE (0800 466 863) for clinical advice