Monkeypox vaccination - MVA-BN

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Imvanex® (Bavarian Nordic)

- Modified vaccinia Ankara (MVA-BN)
- Replication-deficient in mammalian cells

JYNNEOS
Licensed for prevention of smallpox and monkeypox in adults at high risk

Imvamune
Licensed against smallpox, monkeypox and related orthopoxvirus infections in adults at high risk

Imvanex
Licensed against smallpox in adults

Not licensed (off-label)

Imvanex® in comparison with traditionall smallpox vaccines

	MVA-BN (Imvanex)	Traditionelle Pocken-Impfstoffe
Impfvirus	Modified Vaccinia Ankara, nicht-replizierend in humanen Zellen [1,2]	Vaccinia, replizierend in humanen Zellen [3]
Verabreichung	Subkutan, 2 Dosen im Abstand von 28 Tagen [1,2]	Intrakutan, 1 Dosis [3]
Übertragung des Impfvirus	Kein Risiko [2]	Übertragung des Impfvirus auf Ungeimpfte möglich [3]
Schwere Nebenwirkungen	Kein Risiko für unkontrollierte Vermehrung der Impfviren [2]	Risiko für generalisierte Vaccinia, Eczema vaccinatum, progressive Vaccinia und Enzephalitis (in bis zu 3 von 10'000 Geimpften) [3]
Kardiologische Nebenwirkungen	Keine Fälle von Myo-/Perikarditis in klinischen Studien an >7'800 Probanden [2]	Risiko für Myo-/Perikarditis in bis zu 1 von 200 Geimpften [3]

1. ImvanexFachinformation; 2. Volkmann A et al. The Brighton Collaboration standardized template for collection of key information for risk/benefit assessment of a Modified Vaccinia Ankara. Vaccine. 2021 May 21;39(22):3067-3080. (MVA) vaccine platform; 3. ACAM2000 US Fachinformation

Contraindications & side effects

- Contraindications
  - Hypersensitivity to vaccine components: chicken protein, benzonase, gentamicin, ciprofloxacin & TRIS
  - Acute sever febrile illness or infection (postpone vaccination)
  - Pregnancy and breast-feeding (conditional; limited data, administer only after careful risk-benefit assessment)
  - <18J. (conditional; limited data, administer only after careful risk-benefit assessment)
  - No data on potential interaction with other vaccinations → avoid simultaneous administration with other vaccines
- Side effects
  - *Very common*: headache, aching muscles, nausea, tiredness, local reaction at injection site (pain, redness, swelling, hardness or itching)
  - *Common*: chills, fever, joint pain / pain in extremities, loss of appetite, discoloration / lump / bruising at injection site
  - *Rare*: nose and throat infection, upper respiratory tract infection, swollen lymph nodes, abnormal sleep, dizziness, abnormal skin sensations, diarrhea, vomiting, thrombocytopenia, leukopenia, elevated liver enzymes, troponin elevation, inflammatory reaction at injection site
  - In atopic dermatitis: more frequent side effects & flare-up or worsening of skin conditions (7%)

UK Guidlines

- Pre-exposure vaccination for occupational exposure
  - HCWs due to care for confirmed monkeypox cases
  - Individuals undertaking environmental decontamination (even if wearing full PPE)
  - Labory workers handling samples of suspected cases
- Post-exposure prophylaxis (PEP)
  - Within 4 days from exposure to prevent onset of disease
  - Offer up to 14 days post-exposure, may reduce symptoms without preventing disease

	Immediate advice	**Follow up at 28 days**	**Follow up at 2 years**
No previous vaccine	first dose	second dose	boost
Previous live vaccine (not MVA-BN)	first dose	none	none
Previous single dose of MVA-BN	second dose	none	boost
Previous complete course of MVA-BN less than 2 years ago	none	none	boost
Previous complete course of MVA-BN 2 or more years ago	boost	none	none

Thank you for your attention!

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