

This medicinal product is subject to additional monitoring. This will allow for quick identification of new safety information. Healthcare professionals are asked to report any suspected adverse reactions.





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# **Introducing NEXVIAZYME**





## What is NEXVIAZYME (avalglucosidase alfa)?

## The development of NEXVIAZYME marks the next step in Sanofi's commitment to the Pompe community

- NEXVIAZYME is indicated for long-term enzyme replacement therapy for the treatment of patients 1 year of age and older with Pompe disease (acid α-glucosidase deficiency)<sup>1</sup>
- Monotherapy administered every other week via intravenous infusion, supervised by an experienced physician in the management of Pompe disease<sup>1</sup>
- Replaces the GAA enzyme, which is lacking or dysfunctional in people living with Pompe disease<sup>1</sup>

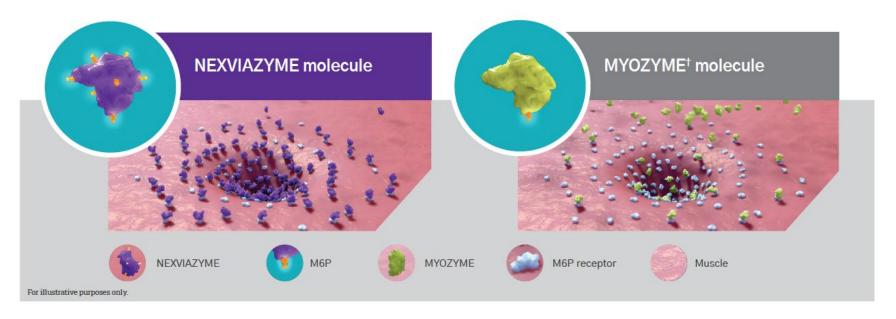
NEXVIAZYME is an ERT that has the same mechanism of action as MYOZYME® – enhanced with more M6P moieties for increased cellular uptake<sup>1-3</sup>

Abbreviations: ERT, enzyme replacement therapy; GAA, acid alpha-glucosidase; M6P, mannose 6-phosphate.



## NEXVIAZYME has 15x more M6P moieties than MYOZYME®1-3

NEXVIAZYME is an enzyme replacement therapy that has been designed to have enhanced M6P content vs. MYOZYME, for increased uptake into muscle cells.<sup>1-3\*</sup>



Upon uptake, the GAA enzyme can degrade and clear lysosomal glycogen to help slow or prevent irreversible muscle damage<sup>1,2</sup>

\*NEXVIAZYME displayed increased uptake into murine cells vs MYOZYME (*P*-value not assessed). Animal data does not necessarily predict human clinical effects. †MYOZYME was the first ERT approved for the treatment of Pompe disease.<sup>4</sup>

Abbreviations: ERT, enzyme replacement therapy; M6P, mannose 6-phosphate.



## When to use NEXVIAZYME



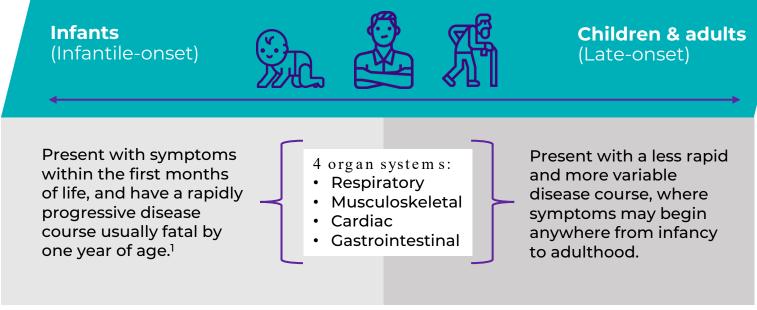


## Disease spectrum: one disease with variable presentations

Differences in disease presentation are observed among infants, children and adults. Patients typically present with symptoms that manifest in four organ systems.<sup>1</sup>



For patients <1 year of age





An ERT for patients ≥1 year of age

The level of residual acid alfa-glucosidase (GAA) activity is considered to be associated with severity and rate of disease progression.<sup>2</sup>

Abbreviations: ERT, enzyme replacement therapy.



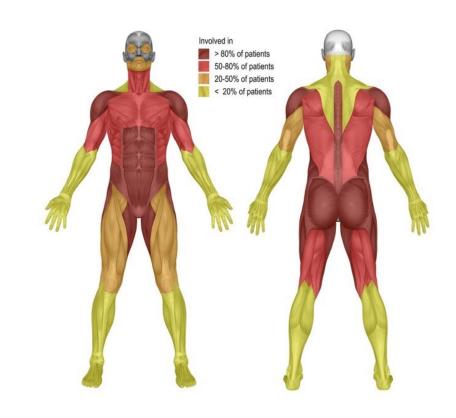
# Common signs and symptoms in children and adults with late-onset Pompe Disease (LOPD)

Children and adults experience steady degeneration of respiratory and skeletal m uscles.1 Respiratory Respiratory failure / Orthopnoea insufficiency Dyspnoea Diaphragm weakness Sleep-disordered breathing Musculoskeletal · Limb-girdle muscle Difficulty walking. weakness climbing stairs Muscle pain Scoliosis / scapular Frequent falls winging · Gait abnormalities Cardiac Less common among adults Gastrointestinal Difficulty chewing / jaw muscle fatigue Poor weight gain / maintenance Swallowing difficulties / weak tongue/macroglossia Gastroesophageal reflux



## Proximal muscle weakness affects most LOPD patients

- In a natural history study of 94 adults with LOPD, proximal trunk and limb muscles were weakened in 50–80% of patients.
- Fewer patients had weakness more distally.



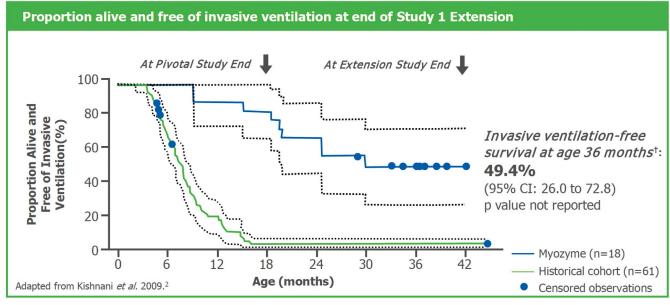
Abbreviations: LOPD, late-onset Pompe disease.



## **MYOZYME in IOPD**

## MYOZYME prolongs survival and survival free of invasive ventilation in infants

Study 1 and the extension study demonstrated that MYOZYME markedly extended survival (72% survival rate at 36 months, 95% CI: 47.9 - 96.0, p value not reported) and survival free of invasive ventilation (49.4% invasive ventilation-free survival rate at 36 mo, 95% CI: 26.0 - 72.8, *P*-value not reported), compared with a historical control group.<sup>1,2</sup>



†Four patients were right-censored from this analysis because they had not reached age 36 months by the end of the study, although they remained free of invasive ventilation at that time.

Abbreviations: IOPD, infantile-onset Pompe disease.



**Study design:** Patients aged <7 months with documented symptoms of IOPD (n=18) were treated with MYOZYME 20 or 40\* mg/kg administered by IV infusion every other week. A closely matched untreated historical control group (n=61) was used as a comparator. The 52-week study was extended (n=16) with a median treatment duration of 2.3 years. Primary endpoint: invasive ventilation-free survival.<sup>1,2</sup>

<sup>\*</sup> The recommended dosage regimen of MYOZYME in Australia is 20 mg/kg of body weight administered once every two weeks as an intravenous infusion.<sup>3</sup>

## **NEXVIAZYME in LOPD**

NEXVIAZYME offers patients with LOPD favourable differences in their motor and respiratory function at Week 49 (6MWT estimated difference: 30.01 m, nominal P=0.04; FVC [% predicted] estimated difference: 2.43%, P=0.06 [not significant])<sup>1</sup>



#### MORE M6P: NEXVIAZYME has 15× more M6P moieties than MYOZYME<sup>1</sup>



#### **EFFICACY OUTCOMES:**

Favourable improvements as compared to MYOZYME<sup>1</sup>

(6MWT estimated difference: 30.01 m, nominal *P*=0.04; FVC [% predicted] estimated difference: 2.43%, *P*=0.06 [not significant])



#### SIMPLE TO START OR SWITCH:

NEXVIAZYME contains 100mg of medication per vial, compared to 50mg per vial for MYOZYME<sup>1,2</sup>

Nexviazyme is a **monotherapy** administered by intravenous infusion without fasting or stabilisers.



## SAFETY DEMONSTRATED IN A PHASE 3 TRIAL:

With NEXVIAZYME, fewer patients with LOPD experienced IARs and SARs as compared to MYOZYME<sup>1</sup>

(P-value not assessed)

Abbreviations: LOPD, late-onset Pompe disease.



## Safety profile of NEXVIAZYME across four clinical trials<sup>1</sup>

#### Most common adverse drug reactions

• The most frequently reported adverse drug reactions (>5%) were pruritis, nausea, headache, rash, urticaria, chills, fatigue, and erythema.

#### **Undesirable effects**

- In clinical studies, IARs were reported to occur in patients at any time during and/or within a few hours after the infusion of NEXVIAZYME and were more likely with higher infusion rates.
  - 3 (2.2%) patients reported severe IARs including symptoms of chest discomfort, nausea, and increased blood pressure

#### **Immunogenicity**

- In adult patients with LOPD, treatment-emergent ADAs were reported in both treatment-naïve (95%) and treatment-experienced patients (49%). In the COMET trial, ADAs did not impact measures of efficacy, while limited impacts on pharmacokinetics and pharmacodynamics were observed primarily with high-titre patients.
- In adult patients with LOPD, one treatment-naive patient and one treatment-experienced patient developed anaphylaxis.
- In paediatric patients with IOPD or LOPD, no patients developed anaphylactic reactions.

Abbreviations: ADAs, antidrug antibodies; IAR, infusion-associated reaction; IOPD, infantile-onset Pompe disease; LOPD, late-onset Pompe disease.



# Fewer patients with LOPD experienced IARs and serious adverse reactions\* vs MYOZYME (P-value not assessed)<sup>1</sup>

#### Safety profile of NEXVIAZYME in the phase 3 COMET trial

Patients with LOPD experiencing undesirable effects (%) <sup>1</sup>					
TREATMENT GROUP	IARs	SEVERE IARs	SERIOUS ADVERSE REACTIONS*	DISCONTINUATION	
NEXVIAZYME (n=51)	25.5% (n=13)	0% (n=0)	2.0% (n=1)	0% (n=0)	
MYOZYME (n=49)	32.7% (n=16)	4.1% (n=2)	6.1% (n=3)	8.2% (n=4)	

<sup>\*</sup>Treatment-related.1

#### IARs1

Fewer patients (25.5%) experienced IARs with NEXVIAZYME compared with those receiving MYOZYME (32.7%) (*P*-value not assessed).

#### Discontinuations due to adverse reactions<sup>1</sup>

- No patients withdrew from the NEXVIAZYME arm during the 49-week study period
- 4 patients in the MYOZYME arm withdrew from the COMET trial due to adverse reactions

**Abbreviations:** IAR, infusion-associated reaction; LOPD, late-onset Pompe disease.



## Infusion-associated reactions (IARs)1

- In clinical studies, IARs were reported to occur at any time during and/or within a few hours after the infusion of NEXVIAZYME and were more likely with higher infusion rates.
- IARs were reported in approximately 42 (30.4%) patients treated with NEXVIAZYME in clinical studies.
- The majority of IARs were assessed as mild to moderate and included symptoms such as chills, cough, diarrhoea, erythema, fatigue, headache, influenza-like illness, nausea, ocular hyperaemia, pain in extremity, pruritus, rash, rash erythematous, tachycardia, urticaria, vomiting, chest discomfort, dizziness, hyperhidrosis, lip swelling, oxygen saturation decreased, pain, palmar erythema, swollen tongue and tremor

- In clinical studies, 3 (2.2%) patients reported severe IARs including symptoms of chest discomfort, nausea and increased blood pressure.
- Patients with an acute underlying illness at the time of NEXVIAZYME infusion appear to be at greater risk for IARs.
- Patients with advanced Pompe disease may have compromised cardiac and respiratory function, which may predispose them to a higher risk of severe complications from IARs.
- Antihistamines, antipyretics, and/or corticosteroids can be given to prevent or reduce IARs. However, IARs may still occur in patients after receiving pretreatment.

Abbreviations: IAR. infusion-associated reaction.



# NEXVIAZYME has been evaluated for safety across the disease spectrum in children and adults<sup>1</sup>

#### **Special populations**

#### Paediatric and elderly populations

 The safety and efficacy of NEXVIAZYME were assessed in patients older than one year of age, including patients over the age of 75 years (n=3). NEXVIAZYME was studied in paediatric patients with IOPD (n=19; 1 to 12 years of age) and one paediatric patient with LOPD (16 years of age). There is no recommended dose adjustment for patients over the age of 65.1

#### Patients with renal or hepatic impairment

 Safety and efficacy have not been studied in patients with hepatic impairment or patients with moderate or severe renal impairment. No dose adjustment is required in patients with mild renal impairment.<sup>1</sup>

#### **Pharmacokinetic properties**

• Population pharmacokinetic analyses in patients with LOPD showed that age and gender did not meaningfully influence the pharmacokinetics of NEXVIAZYME.<sup>1</sup>

#### Special warnings and precautions for use

#### Hypersensitivity reactions including anaphylaxis

- Hypersensitivity reactions, including anaphylaxis, have been reported in patients treated with NEXVIAZYME.<sup>1</sup>
  - In clinical studies, 60 (43.5%) patients experienced hypersensitivity reactions, including six patients who reported severe hypersensitivity reactions and two patients who experienced anaphylaxis.<sup>1</sup>
- If mild or moderate hypersensitivity reactions occur, infusion rate may be slowed or temporarily ceased. If severe hypersensitivity or anaphylaxis occur, discontinue immediately and appropriate medical treatment should be initiated.<sup>1</sup>

Abbreviations: IOPD, infantile-onset Pompe disease; LOPD, late-onset Pompe disease.



# NEXVIAZYME dosing and administration





## Simple to start or switch<sup>1</sup>

NEXVIAZYME dosing is weight-based. Ensure recorded weight is up to date for accurate dosage



For patients ≥1 year

	Patient weight (kg)		Dose (mg/kg)		Patient dose (mg)	Patient dose (mg) 100 (mg/vial)	Vials to reconstitute
Example 1	16	X	20	=	320	3.2 vials	4
Example 2	16	X	40	=	640	6.4 vials	7

Abbreviations: IOPD, infantile-onset Pompe disease; LOPD, late-onset Pompe disease.



## **Infusion Volumes**

Projected intravenous infusion volumes for NEXVIAZYME administration by patient weight at 20 and 40 mg/kg doses

PATIENT WEIGHT RANGE (kg)	TOTAL INFUSION VOLUME (mL) FOR <b>20</b> MG/KG DOSE	TOTAL INFUSION VOLUME (mL) FOR 40 MG/KG DOSE
5.1 to 10	50	100
10.1 to 20	100	200
20.1 to 30	150	300
30.1 to 35	200	400
35.1 to 50	250	500
50.1 to 60	300	600
60.1 to 100	500	1000
100.1 to 120	600	1200
120.1 to 140	700	1400
140.1 to 160	800	1600
160.1 to 180	900	1800
180.1 to 200	1000	2000



## Supplies and equipment

## Supplies and equipment needed for infusion

- NEXVIAZYME single-use vials
- Intravenous (IV) administration set with 0.2 µm, low protein binding (in-line) filter
- Sterile water for injection for reconstitution 10 mL for each vial
- 5% dextrose in water (D5W) for dilution
- Syringes and needles for reconstitution and dilution as per institution protocol
- Additional supplies per institution protocol

NOTE: Filtered needles should NOT be used during preparation of NEXVIAZYME Infusion.



#### Reconstitution

Note: Use aseptic technique during preparation.



 Remove the required number of vials needed for the infusion from the refrigerator and set aside for approximately 30 minutes to allow them to reach room temperature.



- Reconstitute each vial by slowly injecting 10 mL of sterile water for injection (SWFI) into each vial.
  - Inject SWFI by a slow drop-wise addition of the diluent down the inside of the vial and not directly onto the lyophilised powder
  - Avoid forceful impact of the diluent on the lyophilised powder and avoid foaming



- 3. Tilt and roll each vial gently.
  - Do not invert, swirl, or shake
  - Allow the solution to become dissolved
  - After reconstitution, each vial will yield 100 mg/10 mL (10 mg/mL) of NEXVIAZYME

Reconstitution

Note: Use aseptic technique during preparation.

- 4. Perform an immediate visual inspection of the reconstituted solution in vials for particulate matter and discolouration.
  - Reconstituted solution should be clear, colourless to pale yellow
  - Do not use if solution is discoloured or if opaque particles are observed
- 5. Dilute the reconstituted solution without delay
  - If immediate use is not possible, the reconstituted solution can be stored up to 24 hours at 2°C to 8°C
  - Do not freeze



#### **Acceptable**

Clear, colourless to pale yellow



#### Not acceptable

Discoloured, opaque particles, or foreign matter

#### **Dilution**

Dilute in 5% dextrose in water immediately after reconstitution to a final concentration of 0.5 to 4 mg/mL NEXVIAZYME.



- 6. Check the volume for dilution.
  - Remove and discard excess 5% dextrose in water solution (equivalent to the volume of reconstituted NEXVIAZYME solution)
  - Remove air from inside the infusion bag to reduce the risk of foam or protein particle formation



 Slowly withdraw the volume of reconstituted solution from each vial (calculated according to patient's weight).



- 8. The reconstituted solution should be diluted slowly and directly into 5% dextrose in water.
  - Make up the recommended total infusion volume based on the patient's weight
  - Avoid foaming or agitation of the infusion bag, and avoid air introduction into the infusion bag
  - Discard any unused reconstituted solution remaining in the vial in accordance with local requirements



## **Dilution**



- Mix the contents of the infusion bag by gently inverting or massaging the infusion bag.
  - Do not shake
  - After dilution, the solution will have a final concentration of 0.5 to 4 mg/mL of NEXVIAZYME



 Administer the diluted solution without delay. The recommended infusion duration is between 4 to 7 hours.\* Discard any unused diluted solution after 9 hours.



<sup>\*</sup>Infusion duration is determined by patient phenotype.
All images shown are for illustrative purposes. The actual images of product and supplies may vary.

## How to store diluted solution<sup>1</sup>



Can be stored **up to 24 hours** in a refrigerator (2°C to 8°C) and **up to 9 hours** (including infusion time) when stored at room temperature (up to 25 °C)



Discard the diluted solution if refrigerated for **more than 24 hours** or if the diluted solution is not able to be completely infused **within 9 hours** after removal from the refrigerator



Once the diluted solution is removed from the refrigerator, it cannot be re-stored in the refrigerator



Do not freeze



Completely infuse the diluted solution within **9 hours** after removal from the refrigerator



## **Administration steps**

Follow your institution's policy for IV insertion and medication infusion.

- Explain the administration procedure to the patient.
- 2. Obtain vital signs prior to and during the infusion.
- Obtain IV access.
- 4. Draw any required blood work if applicable; flush line with 5% dextrose in water
- 5. Initiate primary infusion line of 5% dextrose in water to maintain patency of IV access.
- 6. Use a programmable intravenous infusion pump to control infusion rate.
- 7. A 0.2µm low protein-binding inline filter is recommended
- 8. NEXVIAZYME should not be infused in the same IV line with other products.

- 9. Set up and prime the administration set with the NEXVIAZYME infusion solution.
- 10. Use care to prevent the appearance of air bubbles in tubing
- 11. Connect administration set to the 0.2µm in-line low protein binding filter set and prime
- 12. Connect to lowest additive port on primary administration set
- 13. Infuse NEXZVIAZYME per the infusion schedule
- 14. Flush the line with 5% dextrose in water at the last infusion rate
- 15. After infusion, remove the administration set, any unused product or waste material and dispose in accordance with local requirements



## How to infuse incrementally<sup>1</sup>

\*Optimal infusion rate should be determined for each patient as per the clinical site protocol.

#### LOPD

#### **Initial and subsequent infusions**

The recommended starting infusion rate is 1 mg/kg/hour. If there are no signs of IARs, gradually increase the infusion rate every 30 minutes in each of the following three steps:

3 mg/kg/hour

5 mg/kg/hour

7 mg/kg/hour

Then maintain the infusion rate at 7 mg/kg/hour until the infusion is complete. The approximate total infusion duration is 4 to 5 hours.



Patients switching to NEXVIAZME will likely not need to change their infusion process or centre.

#### **IOPD**

#### 4-step process

The recommended starting infusion rate is 1 mg/kg/hour. If there are no signs of IARs, gradually increase the infusion rate every 30 minutes in each of the following three steps:

3 mg/kg/hour

5 mg/kg/hour

7 mg/kg/hour

Then maintain the infusion rate at 7 mg/kg/hour until the infusion is complete (4-step process). The approximate total infusion duration is 7 hours.

#### 5-step process

The recommended starting infusion rate is 1 mg/kg/hour, with gradual increase in infusion rate every 30 minutes if there are no signs of IARs. The process may use either the above 4-step process or the following 5-step process:

3 mg/kg/hour

6 mg/kg/hour

8 mg/kg/hour

10 mg/kg/hour

Then maintain the infusion rate at 10 mg/kg/hour until the infusion is complete. The approximate total 5-step infusion duration is 5 hours.

Abbreviations: IAR, infusion-associated reaction; IPOD, infantile-onset Pompe disease; LOPD, late-onset Pompe disease.



## Monitoring<sup>1</sup>

- Infusion should be administered incrementally as determined by patient response and comfort.
- Vital signs should be obtained at each step, before increasing the infusion rate.
- If anaphylaxis or severe hypersensitivity reaction or severe IARs occur, immediately discontinue administration of NEXVIAZYME and initiate appropriate medical treatment.
  - In mild to moderate hypersensitivity reactions or IARs occur, the infusion rate may be slowed or temporarily stopped and/or appropriate medical treatment initiated
  - Symptoms may persist despite temporarily stopping the infusion; therefore, the treating physician should wait at least 30 minutes for symptoms of the reactions to resolve before deciding to stop the infusion for the remainder of the day
  - If symptoms subside, resume infusion rate for 30 minutes at half the rate, or less, of the rate at which the reactions occurred, followed by an increase in infusion rate by 50% for 15 to 30 minutes
  - If symptoms do not recur, increase the infusion rate to the rate at which the reactions occurred and consider continuing to increase the rate in a stepwise manner until the maximum rate is achieved

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This will allow quick identification of new safety information.

Healthcare professionals are asked to report any suspected adverse events at www.tga.gov.au/reporting-problems.

Abbreviations: IAR, infusion-associated reaction; IOPD, infantile-onset Pompe disease; LOPD, late-onset Pompe disease.



# Simplified preparation with 100 mg of medication per vial with NEXVIAZYME vs 50 mg per vial for MYOZYME®1,2

- Preparation is simplified with NEXVIAZYME as the vials contain 100mg vs. 50mg MYOZYME and the reconstituted solution is 10mg/mL (rather than 5mg/mL with MYOZYME)
- Thus, there may be less set up and handling required for preparation of an infusion bag with NEXVIAZYME<sup>1,2</sup>
- This may cut patient wait times and improve clinic efficiency



## How to store1

- Each pack contains one vial each containing 100 mg of avalglucosidase alfa
- Vials should be stored in a refrigerator between 2°C to 8°C
- Do not use NEXVIAZYME after the expiration date
- The reconstituted and diluted solution should be administered without delay
  - The reconstituted product can be stored up to 24 hours when refrigerated at 2°C to 8°C
  - The diluted product can be stored up to 24 hours when refrigerated at 2°C to 8°C and up to 9 hours (including infusion time) when stored at room temperature (up to 25°C)



## Sanofi Support





## **Home infusion**

Sanofi has carefully selected Care For Rare Nursing Providers based on a number of criteria to ensure patient privacy is maintained, patient safety is upheld, and the quality use of medicines is applied





## Arranging the home infusions

- The Care For Rare Nurse will contact patient's doctor and hospital-based nurses to discuss patient-specific infusion information.
- Working with the hospital-based nurse, the Care For Rare Nurse will provide their first infusion with each new patient in the hospital setting. Future infusions will be scheduled at the patient's preferred location (e.g. home, workplace, etc.).
- The Care For Rare Nurse will schedule the next infusion with the patient.
- The Care For Rare Nurse will send a report to the patient's doctor.



#### **Healthcare professional reports**

- Specific patient-related data will be recorded and sent to the patient's healthcare professional by email from the Care For Rare Nurse's electronic database after each infusion.
- This information will include:
  - date of infusion
  - patient's general health condition
  - dose/rate of infusion
  - number of vials used
  - duration of administration
  - rate of administration
  - problems/remarks (related to infusion, e.g., side effects).



## **PBS Information:** NEXVIAZYME. This product is not listed on the PBS. This product is funded under the Life Saving Drugs Program.

Please review full NEXVIAZYME Product Information before prescribing. To access full Product Information, visit <a href="https://gr.medsinfo.com.au/tx/sw.cfm?h=swcnexvi">https://gr.medsinfo.com.au/tx/sw.cfm?h=swcnexvi</a>, scan the QR code or call 1800 818 806.

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Scan for more information

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