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RESEARCH**

APPLICATION NUMBER:

219627Orig1s000

LABELING

HIGHLIGHTS OF PRESCRIBING INFORMATION
These highlights do not include all the information needed to use AMBELVIST safely and effectively. See full prescribing information for AMBELVIST.

AMBELVIST® (gadoquatrane) injection, for intravenous use
Initial U.S. Approval: 2026

WARNING: RISK ASSOCIATED WITH INTRATHECAL USE and NEPHROGENIC SYSTEMIC FIBROSIS
See full prescribing information for complete boxed warning

- Intrathecal administration of gadolinium-based contrast agents (GBCAs) can cause serious adverse reactions including death, coma, encephalopathy, and seizures. AMBELVIST is not approved for intrathecal use (5.1).
- GBCAs increase the risk for nephrogenic systemic fibrosis (NSF) among patients with impaired elimination of the drugs. Avoid use of AMBELVIST in these patients unless the diagnostic information is essential and not available with non-contrasted MRI or other modalities. The risk for NSF appears highest among patients with:
 - Chronic, severe kidney disease (GFR < 30 mL/min/1.73 m²), or
 - Acute kidney injury.Screen patients for acute kidney injury and other conditions that may reduce renal function. For patients at risk for chronically reduced renal function (for example, age >60 years, hypertension or diabetes), estimate the glomerular filtration rate (GFR) through laboratory testing (5.2).

INDICATIONS AND USAGE
AMBELVIST is a gadolinium-based contrast agent indicated in adult and pediatric patients, including term neonates, for use with magnetic resonance imaging (MRI) to detect and visualize lesions with abnormal vascularity in:

- the central nervous system (brain, spine, and associated tissues)
- the body (head and neck, thorax, abdomen, pelvis, and musculoskeletal system) (1)

DOSAGE AND ADMINISTRATION

- Recommended dose for adult and pediatric patients, including term neonates, is 0.01 mmol/kg actual body weight (equivalent to an injection volume of 0.1 mL/kg). (2.1)

- Administer the dose by intravenous injection, manually or by compatible power injector, at 1 mL/sec to 4 mL/sec followed by a flush of 0.9% sodium chloride injection; for pediatric patients, adjust the flow rate and flush volume based on age. (2.2)

DOSAGE FORMS AND STRENGTHS
Injection: 0.1 mmol/mL of gadoquatrane in single-dose vials, single-dose pre-filled syringes, imaging bulk packages, and pharmacy bulk packages. (3)

CONTRAINDICATIONS
History of severe hypersensitivity to AMBELVIST. (4)

- WARNINGS AND PRECAUTIONS**
- Hypersensitivity Reactions: Serious hypersensitivity reactions have occurred with GBCAs. Monitor patients closely for need of emergency cardiorespiratory support. (5.3)
 - Gadolinium Retention: Gadolinium is retained for months or years in brain, bone, and other organs. (5.4)

ADVERSE REACTIONS
Most frequently observed adverse reactions (incidence ≥ 0.2%) were dizziness, headache, injection site reactions, nausea, vomiting, feeling hot, paresthesia, and pruritus. (6.1)

To report SUSPECTED ADVERSE REACTIONS, contact Bayer HealthCare Pharmaceuticals Inc. at 1-888-842-2937 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

USE IN SPECIFIC POPULATIONS
Pregnancy: Use only if imaging is essential during pregnancy and cannot be delayed. (8.1)

See 17 for PATIENT COUNSELING INFORMATION and Medication Guide.

Revised: 6/2026

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FULL PRESCRIBING INFORMATION

WARNING: RISK ASSOCIATED WITH INTRATHECAL USE and NEPHROGENIC SYSTEMIC FIBROSIS

Risk Associated with Intrathecal Use

Intrathecal administration of gadolinium-based contrast agents (GBCAs) can cause serious adverse reactions including death, coma, encephalopathy, and seizures. AMBELVIST is not approved for intrathecal use [see *Warnings and Precautions (5.1)*].

Nephrogenic Systemic Fibrosis

GBCAs increase the risk for nephrogenic systemic fibrosis (NSF) among patients with impaired elimination of the drugs. Avoid use of AMBELVIST in these patients unless the diagnostic information is essential and not available with non-contrasted MRI or other modalities. NSF may result in fatal or debilitating fibrosis affecting the skin, muscle, and internal organs.

The risk for NSF appears highest among patients with:

- Chronic, severe kidney disease (GFR < 30 mL/min/1.73 m²), or
- Acute kidney injury.

Screen patients for acute kidney injury and other conditions that may reduce renal function. For patients at risk for chronically reduced renal function (for example, age > 60 years, hypertension, or diabetes), estimate the glomerular filtration rate (GFR) through laboratory testing.

For patients at highest risk for NSF, do not exceed the recommended AMBELVIST dose and allow a sufficient period of time for elimination of the drug from the body prior to any re-administration [see *Warnings and Precautions (5.2)*].

1 INDICATIONS AND USAGE

AMBELVIST is indicated in adult and pediatric patients, including term neonates, for use with magnetic resonance imaging (MRI) to detect and visualize lesions with abnormal vascularity in:

- the central nervous system (brain, spine, and associated tissues)
- the body (head and neck, thorax, abdomen, pelvis, and musculoskeletal system)

2 DOSAGE AND ADMINISTRATION

2.1 Recommended Dose

The recommended dose of AMBELVIST for adult and pediatric patients, including term neonates, is 0.01 mmol/kg actual body weight (equivalent to an injection volume of 0.1 mL/kg) administered intravenously.

Clarification on Gadolinium Content

- Each molecule of gadoquatane contains four gadolinium (Gd) ions [see *Description (1)*].
- Therefore, the recommended dose of 0.01 mmol/kg of gadoquatane (administered as AMBELVIST) delivers 0.04 mmol Gd/kg.

2.2 Administration and Imaging Instructions

- Administer AMBELVIST as an intravenous injection, manually or by compatible power injector, at a flow rate of approximately 1 mL/second to 4 mL/second, followed by a flush of 0.9% sodium chloride injection. For pediatric patients, adjust the flow rate and flush volume based on age.
- AMBELVIST is for intravenous use only and must not be administered intrathecally [*see Warnings and Precautions (5.1)*].
- Use aseptic technique when preparing and administering AMBELVIST.
- Visually inspect AMBELVIST for particulate matter and discoloration prior to administration. Do not use the solution if it is discolored, particulate matter is present, or the container appears damaged.
- If solidification occurs due to cold exposure, bring AMBELVIST to room temperature before use and inspect to ensure that the solution is clear and colorless to pale yellow.
- Do not mix AMBELVIST with other medications, and do not administer AMBELVIST in the same intravenous line simultaneously with other medications because of the potential for chemical incompatibility.
- Contrast MRI can begin immediately following the injection of AMBELVIST.

2.3 Directions for Use of Single-Dose Containers

Single-Dose Vials

- Pierce the rubber stopper only once.
- Aseptically draw AMBELVIST into the syringe immediately before use.
- Each vial of AMBELVIST is intended for one single dose. Discard any unused vial contents.

Single-Dose Pre-Filled Syringes

- Remove the tip cap from the pre-filled syringe immediately before use.
- Each pre-filled AMBELVIST syringe is for one single dose. Discard any unused syringe contents.

2.4 Directions for Use of Imaging Bulk Package

- AMBELVIST Imaging Bulk Package (IBP) is not for direct infusion.
- The IBP is for use only with an automated contrast injection system, contrast management system, or contrast media transfer set approved or cleared for use with this contrast agent in this IBP.
- See drug and device labeling for information on devices indicated for use with this IBP and techniques to help assure safe use.
- The AMBELVIST IBP is to be used only in a room designated for radiological procedures that involve intravascular administration of a contrast agent.
- Utilize aseptic technique for penetrating the container closure of the AMBELVIST IBP and transferring AMBELVIST.
- Penetrate the container closure only one time with a suitable sterile component of the automated contrast injection

system, contrast management system, or contrast media transfer set (e.g., transfer spike) approved or cleared for use with this contrast agent in this IBP.

- Once the AMBELVIST IBP is punctured, do not remove it from the work area during the entire period of use. Storage temperature of AMBELVIST IBP after the closure has been entered is 20°C to 25°C (68°F to 77°F).
- Maximum use time is 6 hours from puncture. Discard any unused portion 6 hours after puncture of the IBP.
- After the container closure is punctured, if the integrity of the IBP and the delivery system cannot be assured through direct continuous supervision, the IBP and all associated disposables for the automated contrast injection system, contrast management system, or contrast media transfer set (e.g., transfer spike) should be discarded.

2.5 Directions for Use of Pharmacy Bulk Package

- AMBELVIST Pharmacy Bulk Package (PBP) is not for direct infusion.
- The PBP is for use with an appropriate transfer device for filling empty sterile syringes.
- Perform the transfer of AMBELVIST from the PBP in an aseptic work area, such as a laminar flow hood, using aseptic technique.
- Penetrate the closure only one time. Once the PBP is punctured, do not remove it from the aseptic work area.
- Use each individual dose of AMBELVIST promptly following withdrawal from the PBP.
- Withdraw the contents of the PBP within 6 hours after puncture at 20°C to 25°C (68°F to 77°F). Discard any unused portion after 6 hours.

3 DOSAGE FORMS AND STRENGTHS

Injection: 0.1 mmol/mL of gadoquatane as a clear and colorless to pale yellow solution available as:

Strength	Package Type
• 0.2 mmol/2 mL (0.1 mmol/mL) • 0.75 mmol/7.5 mL (0.1 mmol/mL) • 1 mmol/10 mL (0.1 mmol/mL) • 1.5 mmol/15 mL (0.1 mmol/mL)	Single-Dose Vials
• 0.75 mmol/7.5 mL (0.1 mmol/mL) • 1 mmol/10 mL (0.1 mmol/mL) • 1.5 mmol/15 mL (0.1 mmol/mL)	Single-Dose Pre-Filled Syringes
• 3 mmol/30 mL (0.1 mmol/mL) • 6.5 mmol/65 mL (0.1 mmol/mL)	Imaging Bulk Packages
• 3 mmol/30 mL (0.1 mmol/mL) • 6.5 mmol/65 mL (0.1 mmol/mL)	Pharmacy Bulk Packages

4 CONTRAINDICATIONS

AMBELVIST is contraindicated in patients with a history of severe hypersensitivity reactions to AMBELVIST.

5 WARNINGS AND PRECAUTIONS

5.1 Risks Associated with Intrathecal Use

Intrathecal administration of GBCAs can cause serious adverse reactions including death, coma, encephalopathy, and seizures. The safety and effectiveness of AMBELVIST have not been established with intrathecal use. AMBELVIST is not approved for intrathecal use [see *Dosage and Administration* ([2.1](#))].

5.2 Nephrogenic Systemic Fibrosis

GBCAs increase the risk for nephrogenic systemic fibrosis (NSF) among patients with impaired elimination of the drugs. Avoid use of AMBELVIST among these patients unless the diagnostic information is essential and not available with non-contrast enhanced MRI or other modalities. The GBCA-associated NSF risk appears highest for patients with chronic, severe kidney disease (GFR < 30 mL/min/1.73 m²) as well as patients with acute kidney injury. The risk appears lower for patients with chronic, moderate kidney disease (GFR 30 to 59 mL/min/1.73 m²) and little, if any, for patients with chronic, mild kidney disease (GFR 60 to 89 mL/min/1.73 m²). NSF may result in fatal or debilitating fibrosis affecting the skin, muscle, and internal organs. Report any diagnosis of NSF following AMBELVIST administration to Bayer HealthCare (1- 888-842-2937) or FDA (1-800-FDA-1088 or www.fda.gov/medwatch).

Screen patients for acute kidney injury and other conditions that may reduce renal function. Features of acute kidney injury consist of rapid (over hours to days) and usually reversible decrease in kidney function, commonly in the setting of surgery, severe infection, injury, or drug-induced kidney toxicity. Serum creatinine levels and estimated GFR may not reliably assess renal function in the setting of acute kidney injury. For patients at risk for chronically reduced renal function (for example, age > 60 years, diabetes mellitus, or chronic hypertension), estimate the GFR through laboratory testing.

Among the factors that may increase the risk for NSF are repeated or higher than recommended doses of a GBCA and degree of renal impairment at the time of exposure. Record the specific GBCA and the dose administered to a patient. For patients at highest risk for NSF, do not exceed the recommended AMBELVIST dose and allow a sufficient period of time for elimination of the drug prior to re-administration. For patients receiving hemodialysis, physicians may consider the prompt initiation of hemodialysis following the administration of a GBCA in order to enhance the contrast agent's elimination [see *Use in Specific Populations* ([8.6](#)) and *Clinical Pharmacology* ([12.3](#))]. The usefulness of hemodialysis in the prevention of NSF is unknown.

5.3 Hypersensitivity Reactions

With GBCAs, serious hypersensitivity reactions have occurred. In most cases, initial symptoms occurred within half an hour of GBCA administration and resolved with prompt emergency treatment.

- Before AMBELVIST administration, assess all patients for any history of a reaction to contrast media, bronchial asthma, and/or allergic disorders. These patients may have an increased risk for a hypersensitivity reaction to AMBELVIST.
- AMBELVIST is contraindicated in patients with history of severe hypersensitivity reactions to AMBELVIST [see *Contraindications* ([4](#))].
- Administer AMBELVIST only in situations where trained personnel and therapies are promptly available for the treatment of hypersensitivity reactions, including personnel trained in resuscitation.
- During and following AMBELVIST administration, observe patients for signs and symptoms of hypersensitivity reactions.

5.4 Gadolinium Retention

Gadolinium is retained for months or years in several organs. The highest concentrations (nanomoles per gram of tissue) have been identified in the bone, followed by other organs (e.g., brain, skin, kidney, liver, and spleen). The duration of retention also varies by tissue and is longest in bone. Linear GBCAs cause more retention than macrocyclic GBCAs. At equivalent doses, gadolinium retention varies among the linear agents with gadodiamide causing greater retention than other linear agents such as gadoxetate disodium and gadobenate dimeglumine. Retention is lowest and similar among the macrocyclic GBCAs such as gadoterate meglumine, gadobutrol, gadoteridol, gadopicleenol, and gadoquatane.

Consequences of gadolinium retention in the brain have not been established. Pathologic and clinical consequences of GBCA administration and retention in skin and other organs have been established in patients with impaired renal function [see *Warnings and Precautions* (5.2)]. There are rare reports of pathologic skin changes in patients with normal renal function. Adverse events involving multiple organ systems have been reported in patients with normal renal function without an established causal link to gadolinium.

While clinical consequences of gadolinium retention have not been established in patients with normal renal function, certain patients might be at higher risk. These include patients requiring multiple lifetime doses, pregnant and pediatric patients, and patients with inflammatory conditions. Consider the retention characteristics of the agent when choosing a GBCA for these patients. Minimize repetitive GBCA imaging studies, particularly closely spaced studies, when possible.

5.5 Acute Kidney Injury

In patients with chronic renal impairment, acute kidney injury sometimes requiring dialysis has been observed with the use of some GBCAs. Do not exceed the recommended dose; the risk of acute kidney injury may increase with higher than recommended doses.

5.6 Interference with Lesion Visualization

As with other GBCAs, AMBELVIST may obscure certain lesions that are visible on non-contrast MRI. When available, non-contrast MRI images should be reviewed during the interpretation of AMBELVIST MRI scans.

6 ADVERSE REACTIONS

The following clinically significant adverse reactions are discussed elsewhere in the labeling:

- Nephrogenic Systemic Fibrosis [see *Warnings and Precautions* (5.2)]
- Hypersensitivity Reactions [see *Contraindications* (4) and *Warnings and Precautions* (5.3)]

6.1 Clinical Trials Experience

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in clinical practice.

The safety of AMBELVIST was evaluated in four clinical studies in a total of 842 patients who received a single 0.01 mmol/kg dose. This safety population included 697 adult patients from two active comparator, cross-over studies [see *Clinical Studies* (14.1)], 52 adult patients from a dose-finding study, and 93 pediatric patients [see *Use in Specific Populations* (8.4)].

Adult Patients

Among the 749 adult patients (who were exposed to gadoquatane), the mean age was 56 years (range: 18 years to 89 years). Of these patients, 67% were White, 29% Asian, 1% Black or African American, and 3% of other or unspecified race, and 10% were Hispanic or Latino, 76% not Hispanic or Latino, and 14% of unspecified ethnicity.

Table 1 lists adverse reactions that occurred in $\geq 0.2\%$ of adult patients who received 0.01 mmol/kg AMBELVIST.

Table 1: Adverse Reactions Reported in $\geq 0.2\%$ of Adult Patients Who Received AMBELVIST

Adverse Reaction	AMBELVIST 0.01 mmol/kg N=749 (%)
Dizziness	0.9
Headache	0.9
Injection site reactions*	0.7
Nausea	0.5
Vomiting	0.4
Feeling hot	0.4
Paresthesia	0.3
Pruritus	0.3

*Injection site reactions include injection site pain, catheter site pain, injection site coldness, and injection site erythema.

Adverse reactions that occurred in $< 0.2\%$ of adult patients who received 0.01 mmol/kg AMBELVIST included erythema, abdominal discomfort, toothache, feeling cold, decreased glomerular filtration rate, urinary sediment, urinary white blood cells, urticaria, dyspnea, rhinalgia, arthralgia, limb discomfort, hematuria, vertigo, and hyperbilirubinemia.

Pediatric Patients

Among the 93 pediatric patients, the mean age was 7 years (range: 28 days to less than 18 years). Of these patients, 57% were White, 38% Asian, 1% Black or African American, and 4% of unspecified race, and 14% were Hispanic or Latino, 80% not Hispanic or Latino, and 6% of unspecified ethnicity.

Adverse reactions in pediatric patients who received 0.01 mmol/kg AMBELVIST included (each occurring in 1% of patients): apnea, pyrexia, decreased platelet count, erythema, and rash [see *Use in Specific Populations* (8.4)].

6.2 Postmarketing Experience

The following additional adverse reactions have been identified during postmarketing use of GBCAs. Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to drug exposure.

Gastrointestinal Disorders: Acute pancreatitis with onset within 48 hours after GBCA administration.

General Disorders and Administration Site Conditions: Fatigue, asthenia, pain syndromes, and heterogeneous clusters of symptoms in the neurological, cutaneous, and musculoskeletal systems with variable onset and duration after GBCA administration [see *Warnings and Precautions* (5.4)]

Respiratory, Thoracic, and Mediastinal Disorders: Acute respiratory distress syndrome, pulmonary edema.

Skin Disorders: Gadolinium-associated plaques

8 USE IN SPECIFIC POPULATIONS

8.1 Pregnancy

Risk Summary

There are no available data on AMBELVIST use in pregnant women to evaluate for a drug-associated risk of major birth defects, miscarriage, or other adverse maternal or fetal outcomes. GBCAs cross the placenta and result in fetal exposure. In human placental imaging studies, contrast was visualized in the placenta and fetal tissues after maternal GBCA administration. Based on animal studies, use of GBCAs during pregnancy may result in fetal gadolinium retention.

Published epidemiological studies on the association between GBCAs and adverse fetal outcomes have reported inconsistent findings and have important methodological limitations (*see Data*).

In animal reproduction studies, there were no adverse developmental effects observed in rats or rabbits with intravenous administration of gadoquatane during organogenesis (*see Data*). Because of the potential risks of gadolinium to the fetus, use AMBELVIST only if imaging is essential during pregnancy and cannot be delayed.

The background risk of major birth defects and miscarriage for the indicated population is unknown. All pregnancies have a background risk of birth defects, loss, or other adverse outcomes. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2% to 4% and 15% to 20%, respectively.

Data

Human Data

Available data regarding exposure to GBCAs during pregnancy from published epidemiological studies are not sufficient to assess the risk of adverse fetal and neonatal effects that may be associated with GBCAs. A retrospective cohort study of over 1.4 million pregnancies in Ontario, Canada, comparing pregnant women who had a GBCA MRI to pregnant women who did not have an MRI, reported a higher occurrence of stillbirths and neonatal deaths in the group receiving GBCA MRI. Limitations of this study include a lack of comparison with non-contrast MRI and lack of information about the maternal indication for MRI. Another retrospective cohort study of over 11 million pregnancies in the Medicaid database found no increased risk of fetal or neonatal death or Neonatal Intensive Care Unit admission when comparing pregnancies exposed to GBCA MRI versus non-contrast MRI. These two retrospective observational studies assessed a limited number of potential pregnancy outcomes and did not evaluate the full spectrum of potential fetal risk.

Animal Data

Gadolinium Retention

GBCAs administered to pregnant non-human primates (0.1 mmol Gd/kg on gestational days 85 and 135) result in measurable gadolinium concentration in the offspring in bone, brain, skin, liver, kidney, and spleen for at least 7 months. GBCAs administered to pregnant mice (2 mmol Gd/kg daily on gestational days 16 through 19) result in measurable gadolinium concentrations in the pups in bone, brain, kidney, liver, blood, muscle, and spleen at one-month postnatal age.

Reproductive Toxicology

Gadoquatane had no effect on embryo-fetal development in rats and rabbits at dose levels of up to 1.55 mmol Gd/kg/day (corresponding to 18 and 23 times the human exposure in rats and rabbits, respectively). When rats were treated through pregnancy and lactation at dose levels of up to 1.56 mmol Gd/kg/day (39 times the recommended human dose), there were no adverse effects observed on survival, growth, sexual maturation, or neurobehavioral and reproductive function in the offspring. The exposure at the highest dose corresponded to 38 times (Lactation Day 4) and 12 times (Lactation Day 20) the exposure in terms of AUC in humans.

8.2 Lactation

Risk Summary

There are no data on the presence of gadoquatane in human milk, the effects on the breastfed infant, or the effects on milk production. However, published lactation data on other GBCAs indicate that 0.01% to 0.04% of the maternal gadolinium dose is present in breast milk, and there is limited GBCA gastrointestinal absorption in the breast-fed infant. Gadoquatane is present in rat milk (*see Data*). The developmental and health benefits of breastfeeding should be

considered along with the mother's clinical need for AMBELVIST and any potential adverse effects on the breastfed infant from AMBELVIST or from the underlying maternal condition.

Data

In lactating rats that received intravenous gadoquatane at up to 1.56 mmol Gd/kg/day (39 times the recommended human dose), small amounts of gadoquatane were excreted in rat milk. The concentration of gadolinium in animal milk does not necessarily predict the concentration of gadolinium in human milk.

8.4 Pediatric Use

The safety and effectiveness of AMBELVIST for use with MRI to detect and visualize lesions with abnormal vascularity in the CNS (brain, spine, and associated tissues) and the body (head and neck, thorax, abdomen, pelvis, and musculoskeletal system) have been established in pediatric patients, including term neonates. Use of AMBELVIST in this age group is supported by evidence from adequate and well-controlled studies of AMBELVIST in adults, with additional pharmacokinetic and safety data from 93 pediatric patients aged 28 days to less than 18 years who received one 0.01 mmol/kg dose of AMBELVIST and underwent MRI of any body region [see *Adverse Reactions* ([6.1](#)), *Clinical Pharmacology* ([12.3](#)), and *Clinical Studies* ([14.2](#), [14.3](#))].

Adverse reactions in pediatrics included an episode of apnea in a 4-week-old patient with a history of cerebral vein thrombosis, seizures, and cerebral hemorrhage, occurring one minute after receiving AMBELVIST 0.01 mmol/kg (0.44 mL) at a rate of 0.8 mL/sec. The patient experienced sudden blood oxygen desaturation to 65% which returned to 100% within 11 minutes after the inhaled oxygen flow rate increased [see *Adverse Reactions* ([6.1](#))].

The safety of AMBELVIST has not been established in preterm neonates.

8.5 Geriatric Use

Of the total number of patients in clinical studies of AMBELVIST, 238 (28%) of patients were 65 years of age and older, and 75 (9%) were 75 years of age and older. No overall differences in safety or effectiveness were observed between these patients and younger patients.

This drug is known to be excreted by the kidney, and the risk of adverse reactions to this drug may be greater in patients with impaired renal function. Because elderly patients are more likely to have decreased renal function, it may be useful to monitor renal function [see *Warnings and Precautions* ([5.2](#)) and *Use in Specific Populations* ([8.6](#))].

8.6 Renal Impairment

In patients with renal impairment, the exposure of gadoquatane is increased compared to patients with normal renal function. This may increase the risk of adverse reactions such as nephrogenic systemic fibrosis (NSF). Avoid use of AMBELVIST among these patients unless the diagnostic information is essential and not available with non-contrast MRI or other modalities. No dose adjustment of AMBELVIST is recommended for patients with renal impairment. AMBELVIST can be removed from the body by hemodialysis [see *Warnings and Precautions* ([5.2](#)) and *Clinical Pharmacology* ([12.3](#))].

10 OVERDOSAGE

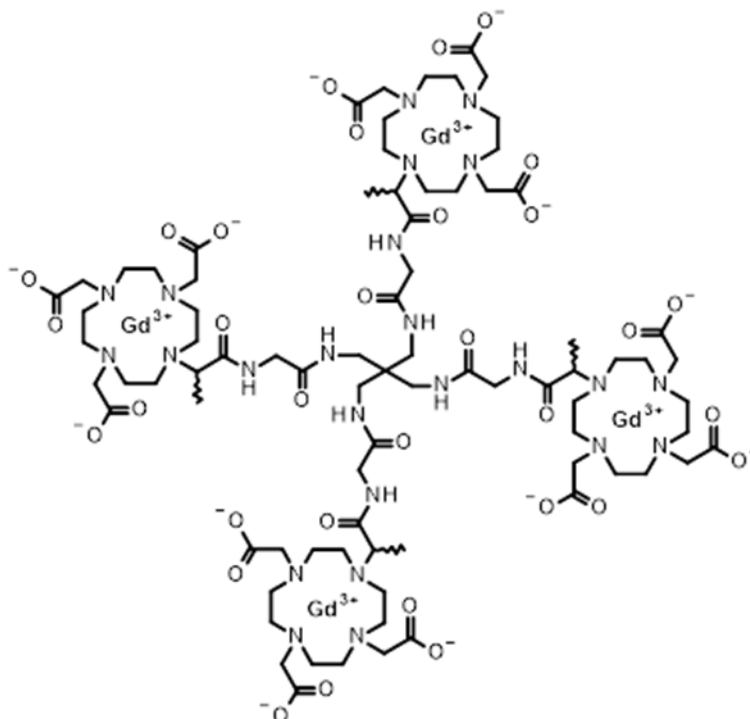
AMBELVIST can be removed by hemodialysis in the event of an overdose [see *Clinical Pharmacology* ([12.3](#))].

For additional management recommendations, consider contacting the Poison Help line (1-800-222-1222) or a medical toxicologist.

11 DESCRIPTION

AMBELVIST (gadoquatrane) injection is a paramagnetic tetrameric macrocyclic gadolinium-based contrast agent for intravenous use.

The chemical name for gadoquatrane is tetragadolinium [4,10-bis(carboxylatomethyl)-7-{3,6,12,15-tetraoxo-16-[4,7,10-tris-(carboxylatomethyl)-1,4,7,10-tetraazacyclododecan-1-yl]-9,9-bis({[(2-[4,7,10-tris-(carboxylatomethyl)-1,4,7,10-tetraazacyclododecan-1-yl]propanoyl)amino]acetyl}-amino)methyl)-4,7,11,14-tetraazaheptadecan-2-yl}-1,4,7,10-tetraazacyclododecan-1-yl]acetate, with a molecular formula of $C_{81}H_{128}Gd_4N_{24}O_{32}$ and a molecular weight of 2,579.1 g/mol. The structural formula of gadoquatrane is:



AMBELVIST is a sterile, clear, colorless to pale yellow solution. Each mL contains 257.9 mg (0.1 mmol) of gadoquatrane (containing 0.4 mmol of gadolinium) and the following inactive ingredients: 0.196 mg of calcobutrol, 3.14 mg of sodium chloride, 1.21 mg of trometamol, hydrochloric acid (for pH adjustment), and water for injection.

The main physicochemical properties of AMBELVIST are listed in Table 2:

Table 2: Physicochemical Properties of AMBELVIST

Parameter	Value
Osmolality at 37°C (mOsm/kg H ₂ O)	270 to 370
Viscosity at 20°C (mPa·s)	2.55
Viscosity at 37°C (mPa·s)	1.76
pH	6.9 to 7.9

12 CLINICAL PHARMACOLOGY

12.1 Mechanism of Action

Gadoquatrane is a paramagnetic tetrameric macrocyclic non-ionic complex of gadolinium that develops a magnetic moment when placed in a magnetic field. The magnetic moment alters the relaxation rates of water protons in its vicinity in the body, leading to an increase in the signal intensity (brightness) of tissues.

12.2 Pharmacodynamics

In MRI, visualization of normal and pathological tissue depends in part on variations in the radiofrequency signal intensity that occur with:

- differences in proton density
- differences of the spin-lattice or longitudinal relaxation times (T_1).
- differences in the spin-spin or transverse relaxation time (T_2).

Gadoquatrane alters the T_1 and T_2 relaxation times in tissues in the magnetic field of an MRI scanner. The extent to which a contrast agent can affect the relaxation rate ($1/T_1$ or $1/T_2$) of tissue water is termed relaxivity (r_1 or r_2).

The relaxivity (r_1) of gadoquatrane is presented in Table 3.

Table 3: Relaxivity (r_1) of Gadoquatrane* in Human Plasma at 37°C

Magnetic Field Strength	Relaxivity (r_1) (L/mmol/sec)
1.5 T	47
3.0 T	41

*Each molecule of gadoquatrane contains 4 chelated gadolinium ions [see Description ([11](#))].

Cardiac Electrophysiology

At 5 times the recommended dose of gadoquatrane, clinically significant QTc interval prolongation was not observed.

12.3 Pharmacokinetics

The peak plasma concentration (C_{max}) and area under the concentration time curve (AUC) of gadolinium (Gd) increased proportionally over a dose range from 0.0025 to 0.05 mmol/kg of gadoquatrane (0.25 to 5 times the recommended dose). At the recommended dose, the median (5th, 95th percentile) C_{max} and AUC_{inf} were 394 (249, 628) $\mu\text{mol Gd/L}$ and 462 (315, 766) $\mu\text{mol Gd}\cdot\text{h/L}$, respectively. The pharmacokinetic (PK) parameters of gadolinium by age group are shown in Table 4.

Table 4: Pharmacokinetic Parameters (Median, (5th, 95th Percentile)) of Gadolinium^a by Age Group

	Adults N=527	0 to <2 years N=23	2 to <12 years N=45	12 to <18 years N=24	0 to <18 years N=92
eGFR (mL/min/1.73m ²)	105 (91.5, 126)	131 (74.7, 179)	141 (101, 192)	116 (85.6, 155)	134 (85.1, 186)
AUC_{inf} ($\mu\text{mol Gd}\cdot\text{h/L}$)	421 (308, 651)	287 (214, 353)	250 (200, 342)	347 (264, 460)	284 (203, 398)

CL/BW (L/h/kg)	0.095 (0.062, 0.130)	0.139 (0.113, 0.190)	0.160 (0.116, 0.202)	0.115 (0.087, 0.150)	0.142 (0.100, 0.194)
Vss/BW (L/kg)	0.205 (0.157, 0.249)	0.245 (0.226, 0.259)	0.233 (0.199, 0.244)	0.198 (0.171, 0.230)	0.230 (0.175, 0.251)
t_{1/2 eff} (h)	1.47 (1.16, 2.24)	1.19 (0.928, 1.52)	1.01 (0.829, 1.28)	1.15 (1.04, 1.34)	1.07 (0.844, 1.40)
C₁₀ (μmol Gd/L)	268 (209, 374)	184 (167, 199)	190 (175, 228)	236 (193, 268)	193 (168, 261)
C₂₀ (μmol Gd/L)	216 (171, 295)	153 (135, 164)	156 (139, 193)	200 (161, 228)	160 (136, 220)

^a at the recommended dose of gadoquatrane

Abbreviations: N, number of subjects; eGFR, estimated glomerular filtration rate; AUC_{inf}, area under the plasma concentration-time curve from time zero extrapolated to infinity; CL/BW, clearance normalized by body weight; Vss/BW, volume of distribution at steady state normalized by body weight; t_{1/2 eff}, effective half-life; C₁₀, plasma concentration at 10 minutes post-dose; C₂₀, plasma concentration at 20 minutes post-dose

Distribution

After intravenous administration, gadoquatrane is distributed from the vascular to the extracellular space.

The median (5th, 95th percentile) volume of distribution over body weight of gadolinium at steady state (Vss/BW) is 0.205 (0.157, 0.252) L/kg.

Plasma protein binding is < 1%.

Following GBCA administration, gadolinium is present for months or years in brain, bone, skin, and other organs [see *Warnings and Precautions* (5.4)]. It is unknown whether the recommended dose of AMBELVIST results in similar or different levels of gadolinium retention relative to those of other approved macrocyclic GBCAs at their recommended doses.

Elimination

The median (5th, 95th percentile) effective elimination half-life (t_{1/2, eff}) of gadolinium is 1.6 (1.2, 2.6) hours.

The median (5th, 95th percentile) total body clearance over body weight (CL/BW) is 0.087 (0.052, 0.13) L/h/kg.

Metabolism

Gadoquatrane is not metabolized.

Excretion

Gadoquatrane is mainly eliminated through the kidneys by glomerular filtration. On average, 91% (CV 13%) of the dose was excreted in the urine within 12 hours after intravenous administration. Extrarenal elimination is negligible; less than 1% of the dose was detectable in feces.

Specific Populations

No clinically significant differences in PK of gadolinium were observed based on age (geriatric vs. younger patients) or sex (male vs. female).

Pediatric Patients

The PK profile of gadolinium in pediatric patients is generally comparable to and within range of that observed in adults. See Table 4 for the PK parameters of gadolinium at the recommended dose of gadoquatane by age.

Patients with Renal Impairment

Gadolinium distributes into the extracellular space and is mainly eliminated by the kidney. Gadolinium clearance decreased as the severity of renal impairment increased, leading to higher total drug exposure (AUC) and prolonged excretion time. Despite the effects on total exposure, early plasma concentrations of gadolinium were not affected by the subjects' level of renal function [see *Warnings and Precautions* (5.2) and *Use in Specific Populations* (8.6)].

Table 5 presents the pharmacokinetic parameters of gadolinium at the recommended dose of gadoquatane in adults with varying degrees of renal function (normal, mild, and moderate impairment) and for virtual patients representing severe renal impairment.

Table 5: Pharmacokinetic Parameters (Median, (5th, 95th Percentile)) of Gadolinium^a by Renal Function in Adults

	Normal renal function (eGFR ≥90 mL/min/1.73 m ²) N=527	Mild renal impairment (eGFR ≥60-89 mL/min/1.73 m ²) N=285	Moderate renal impairment (eGFR ≥30-59 mL/min/1.73 m ²) N=58	Severe renal impairment^b (eGFR <30 mL/min/1.73 m ²)
AUC_{inf} (μmol Gd*h/L)	421 (308, 651)	576 (423, 908)	851 (579, 1315)	2016 (1252, 4283)
V_{ss}/BW (L/kg)	0.205 (0.157, 0.249)	0.202 (0.158, 0.253)	0.193 (0.164, 0.226)	0.335 (0.246, 0.391)
CL/BW [L/h/kg]	0.095 (0.062, 0.130)	0.070 (0.044, 0.095)	0.047 (0.031, 0.069)	0.0198 (0.0093, 0.032)
t_{1/2,eff} [h]	1.47 (1.16, 2.24)	1.97 (1.51, 3.25)	2.94 (1.84, 5.05)	11.3 (7.25, 24.0)
C₁₀ (μmol Gd/L)	268 (209, 374)	279 (216, 382)	303 (242, 367)	304 (232, 427)
C₂₀ (μmol Gd/L)	216 (171, 295)	235 (186, 311)	266 (211, 314)	258 (204, 355)

^a at the recommended dose of gadoquatane

^b predicted based on virtual patients (N=10,000)

Abbreviations: N, number of subjects; AUC_{inf}, area under the plasma concentration-time curve from time zero extrapolated to infinity; V_{ss}/BW, volume of distribution at steady state normalized by body weight; CL/BW, clearance normalized by body weight; t_{1/2,eff}, effective half-life; C₁₀, plasma concentration at 10 minutes post-dose; C₂₀, plasma concentration at 20 minutes post-dose

In patients with mild or moderate renal impairment, about 90% of the administered gadoquatane was recovered in urine within 24 hours. In patients with severely impaired renal function, recovery of a similar amount is anticipated in urine within 5 to 7 days.

Gadoquatrane has been shown to be dialyzable in an in vitro hemodialysis study. After 1 hour of in vitro hemodialysis, approximately 97% of gadoquatrane was removed from the plasma.

13 NONCLINICAL TOXICOLOGY

13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

Carcinogenicity

Carcinogenicity studies in animals have not been conducted with gadoquatrane.

Mutagenesis

Gadoquatrane was not mutagenic or clastogenic with or without metabolic activation in five strains of the Ames bacterial mutagenicity assay (TA100, TA98, TA1535, TA1537, and TA102), or *in vitro* and *in vivo* micronucleus assays.

Impairment of Fertility

No adverse effects on reproductive performance or pregnancy outcome were observed in parental rats following daily intravenous administration of gadoquatrane before and during gestation at up to 0.54 mmol Gd/kg/day (corresponding to 4 times the human exposure). At 1.54 mmol Gd/kg/day (12 times the human exposure), a slight increase in the number of dead embryos and the percentage of post-implantation loss (4 of the 20 females in the treatment group each having at least 3 dead embryos) was observed and considered potentially related to gadoquatrane.

14 CLINICAL STUDIES

14.1 Overview of Clinical Studies

The safety and effectiveness of AMBELVIST were investigated in two randomized, multicenter, double-blind, active comparator, crossover studies, Study 1 (NCT05915702) and Study 2 (NCT05915728). Study 1 focused on central nervous system (CNS) pathologies, while Study 2 addressed pathologies in non-CNS body regions.

In a random order separated by a 2- to 14-day period, each patient received AMBELVIST and an active comparator. AMBELVIST was administered at a dose of 0.01 mmol/kg, which delivers 0.04 mmol gadolinium (Gd)/kg. The active comparator was a macrocyclic GBCA (gadobutrol, gadoterate, or gadoteridol) administered at a standard dose of 0.1 mmol Gd/kg.

For each drug, pre-contrast (unenhanced) and paired (pre-contrast and post-contrast) image sets were separately evaluated by three independent central readers who were blinded to clinical information and identity of the contrast agent. Each reader assessed up to five lesions per patient on three visualization scores: contrast enhancement (4-point scale), delineation (4-point scale), and morphology (3-point scale). The number of lesions was also analyzed. An additional independent central reader performed lesion tracking to allow matching of lesions between pre-contrast and paired images.

14.2 MRI of the CNS

Study 1 included 305 patients scheduled for MRI with known or suspected pathology of the CNS. Of these, 237 patients had assessable MR image sets and at least one matching lesion between paired AMBELVIST and pre-contrast MRI. These patients had a mean age of 56 years (range: 20 to 84 years), with 58% being female. Of the study population, 67% were White, 29% Asian, 1% Black or African American, <1% of multiple racial background, and 3% of unspecified race.

The blinded readers' scores of paired pre- and post-ABELVIST images and pre-contrast images alone for all lesion visualization criteria are presented in Table 6.

Table 6: Patient-Level CNS Visualization Scores Comparing Paired Pre- and Post-AMBELVIST to Pre-AMBELVIST MRI (N=237)

Reader	Visualization Scores	Mean Estimate (SE)			95% CI Difference
		Paired	Pre-Contrast	Difference*	
1 N=233	Contrast Enhancement	2.12 (0.06)	1.00 (0.00)	1.12 (0.06)	(1.00, 1.24)
	Border Delineation	3.16 (0.04)	2.15 (0.04)	1.01 (0.05)	(0.91, 1.12)
	Internal Morphology	2.55 (0.03)	1.67 (0.03)	0.88 (0.04)	(0.80, 0.96)
2 N=201	Contrast Enhancement	3.03 (0.08)	1.00 (0.00)	2.03 (0.08)	(1.86, 2.19)
	Border Delineation	3.37 (0.06)	2.04 (0.05)	1.33 (0.08)	(1.17, 1.50)
	Internal Morphology	2.68 (0.04)	1.64 (0.04)	1.04 (0.06)	(0.92, 1.15)
3 N=235	Contrast Enhancement	2.09 (0.05)	1.01 (0.01)	1.08 (0.05)	(0.99, 1.17)
	Border Delineation	2.16 (0.03)	1.96 (0.03)	0.20 (0.04)	(0.13, 0.28)
	Internal Morphology	1.66 (0.04)	1.30 (0.03)	0.36 (0.04)	(0.28, 0.44)

Abbreviations: CI, confidence interval; MRI, magnetic resonance imaging; SE, standard error

Notes: The average lesion score per patient was used. Contrast enhancement and border delineation were measured on a 4-point scale and internal morphology was measured on a 3-point scale. Only patients with at least 1 matched lesion were included in the analysis. Among them, for patients who had unmatched lesions between image sets, the missing scores were assigned the worst score of '1'. For each patient, difference at patient level was calculated as paired pre- and post-AMBELVIST average lesion score minus pre-AMBELVIST average lesion score; the reported mean difference was obtained by taking the average of these difference scores across patients.

*p-value <0.0001 for all rows

AMBELVIST visualization scores and number of lesions identified per patient were similar to those of other tested GBCAs in descriptive analyses.

14.3 MRI of Non-CNS Body Regions

Study 2 included 410 patients with known or suspected pathology in non-CNS body regions, including head and neck, thorax, abdomen, pelvis, and extremities. Of these, 312 patients had assessable MR image sets and at least one matching lesion between paired AMBELVIST and pre-contrast MRI. These patients had a mean age of 58 years (range: 20 to 84), with 48% being female. Of the study population, 70% were White, 28% Asian, <1% Black or African American, and 2% of unspecified race.

A total of nine readers were divided into three specialization groups of three readers each for breast (N=32), cardiovascular (N=24), and other non-CNS body (N=256) imaging.

AMBELVIST demonstrated similar increases in lesion visualization scores across different reader groups (breast, cardiovascular, and other non-CNS body). Within the other non-CNS body group, scores also increased consistently across different anatomic regions. Lesion visualization scores for other non-CNS body imaging are summarized in Table 7.

Table 7: Patient-Level Body Lesion Visualization Scores Comparing Paired Pre- and Post-AMBELVIST to Pre-AMBELVIST MRI (N=256)

Reader	Visualization Scores	Mean Estimate (SE)			95% CI Difference
		Paired	Pre-Contrast	Difference	
1 N=242	Contrast Enhancement	3.31 (0.06)	1.02 (0.01)	2.30 (0.06)	(2.17, 2.42)
	Border Delineation	3.32 (0.06)	1.04 (0.02)	2.28 (0.06)	(2.16, 2.41)
	Internal Morphology	2.56 (0.04)	1.03 (0.01)	1.53 (0.04)	(1.45, 1.61)
2	Contrast Enhancement	2.70 (0.07)	1.00 (0.00)	1.70 (0.07)	(1.56, 1.84)

N=250	Border Delineation	3.19 (0.05)	2.59 (0.03)	0.61 (0.06)	(0.48, 0.73)
	Internal Morphology	2.47 (0.03)	1.77 (0.03)	0.69 (0.05)	(0.60, 0.79)
3 N=250	Contrast Enhancement	2.84 (0.06)	1.00 (0.00)	1.83 (0.06)	(1.72, 1.94)
	Border Delineation	3.01 (0.06)	1.46 (0.03)	1.55 (0.06)	(1.42, 1.67)
	Internal Morphology	2.48 (0.04)	1.09 (0.02)	1.39 (0.04)	(1.30, 1.47)

Abbreviations: CI, Confidence interval; MRI, magnetic resonance imaging; SE, Standard error

Notes: These data are based on 256 patients who had non-breast and non-cardiovascular body MRI. The average lesion score per patient was used. Only patients with at least 1 matched lesion were included in the analysis. Among them, for patients who had unmatched lesions between image sets, the missing scores were assigned the worst score of '1'. Contrast enhancement and border delineation were measured on a 4-point scale and internal morphology was measured on a 3-point scale. For each patient, difference was calculated as paired pre- and post-AMBELVIST average lesion score minus pre-AMBELVIST average lesion score; the reported mean difference was obtained by taking the average of these difference scores across patients.

AMBELVIST visualization scores and number of lesions identified per patient were similar to those of other tested GBCAs in descriptive analyses.

16 HOW SUPPLIED/STORAGE AND HANDLING

How Supplied

AMBELVIST (gadoxetate) injection is a clear and colorless to pale yellow solution available in the following presentations:

Strength	Package Type	Sale Unit	NDC
0.2 mmol/2 mL (0.1 mmol/mL)	Single-Dose Vial	Cartons of 3 vials	50419-321-11
0.75 mmol/7.5 mL (0.1 mmol/mL)	Single-Dose Vial	Cartons of 10 vials	50419-322-11
1 mmol/10 mL (0.1 mmol/mL)	Single-Dose Vial	Cartons of 10 vials	50419-323-11
1.5 mmol/15 mL (0.1 mmol/mL)	Single-Dose Vial	Cartons of 10 vials	50419-324-11
0.75 mmol/7.5 mL (0.1 mmol/mL)	Single-Dose Pre-Filled Syringe	Cartons of 5 syringes	50419-330-11
1 mmol/10 mL (0.1 mmol/mL)	Single-Dose Pre-Filled Syringe	Cartons of 5 syringes	50419-331-11
1.5 mmol/15 mL (0.1 mmol/mL)	Single-Dose Pre-Filled Syringe	Cartons of 5 syringes	50419-332-11
3 mmol/30 mL (0.1 mmol/mL)	Imaging Bulk Package	Cartons of 10 bottles	50419-326-11
6.5 mmol/65 mL (0.1 mmol/mL)	Imaging Bulk Package	Cartons of 10 bottles	50419-327-11
3 mmol/30 mL (0.1 mmol/mL)	Pharmacy Bulk Package	Cartons of 10 bottles	50419-328-11
6.5 mmol/65 mL (0.1 mmol/mL)	Pharmacy Bulk Package	Cartons of 10 bottles	50419-329-11

Storage and Handling

Store at 25°C (77°F); excursions permitted to 15°C to 30°C (59°F to 86°F) [see USP Controlled Room Temperature].

17 PATIENT COUNSELING INFORMATION

Advise the patient to read the FDA-approved patient labeling (Medication Guide).

Nephrogenic Systemic Fibrosis

Inform the patient that AMBELVIST may increase the risk of NSF among patients with impaired elimination of the drug and that NSF may result in fatal or debilitating fibrosis affecting the skin, muscle, and internal organs.

Instruct the patient to contact their physician if they develop signs or symptoms of NSF following AMBELVIST administration, such as burning, itching, swelling, scaling, hardening and tightening of the skin; red or dark patches on the skin; stiffness in joints with trouble moving, bending, or straightening the arms, hands, legs, or feet; pain in the hip bones or ribs; or muscle weakness [see *Warnings and Precautions* ([5.2](#))].

Gadolinium Retention

Advise patients that gadolinium is retained for months or years in brain, bone, skin, and other organs following AMBELVIST administration even in patients with normal renal function. The clinical consequences of retention are unknown. Retention depends on multiple factors and is greater following administration of linear GBCAs than following administration of macrocyclic GBCAs [see *Warnings and Precautions* ([5.4](#))].

Pregnancy

Advise pregnant women of the potential risk of fetal exposure to AMBELVIST [see *Use in Specific Populations* ([8.1](#))].

Manufactured for:

Bayer HealthCare Pharmaceuticals Inc.
Whippany, NJ 07981

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MEDICATION GUIDE
AMBELVIST (am bel' vist)
(gadoquatrane)
injection, for intravenous use

What is the most important information I should know about AMBELVIST?

- GBAs like AMBELVIST may cause serious side effects including death, coma, encephalopathy, and seizures when it is given intrathecally (injection given into the spinal canal). It is not known if AMBELVIST is safe and effective with intrathecal use. **AMBELVIST is not approved for this use.**
- AMBELVIST contains a metal called gadolinium. Small amounts of gadolinium can stay in your body including the brain, bones, skin and other parts of your body for a long time (several months to years).
- It is not known how gadolinium may affect you, but so far, studies have not found harmful effects in patients with normal kidneys.
- Rarely, patients have reported pains, tiredness, and skin, muscle or bone ailments for a long time, but these symptoms have not been directly linked to gadolinium.
- There are different GBAs that can be used for your MRI exam. The amount of gadolinium that stays in the body is different for different gadolinium medicines. Gadolinium stays in the body more after gadodiamide than after gadoxetate disodium or gadobenate dimeglumine. Gadolinium stays in the body the least after gadoterate meglumine, gadobutrol, gadoteridol, gadopiclesol, and gadoquatrane.
- People who get many doses of gadolinium medicines, women who are pregnant and young children may be at increased risk from gadolinium staying in the body.
- Some people with kidney problems who get gadolinium medicines can develop a condition with severe thickening of the skin, muscles and other organs in the body called nephrogenic systemic fibrosis (NSF). Your healthcare provider should screen you to see how well your kidneys are working before you receive AMBELVIST.

What is AMBELVIST?

- AMBELVIST is a prescription medicine called a gadolinium-based contrast agent (GBCA). AMBELVIST, like other GBAs, is injected into your vein and used with a magnetic resonance imaging (MRI) scanner.
- An MRI exam with a GBCA, including AMBELVIST, helps your healthcare provider to see problems better than an MRI exam without a GBCA.
- Your healthcare provider has reviewed your medical records and has determined that you would benefit from using a GBCA with your MRI exam.

Who should not receive AMBELVIST?

Do not receive AMBELVIST if you have had a severe allergic reaction to AMBELVIST.

Before receiving AMBELVIST, tell your healthcare provider about all your medical conditions, including if you:

- have had any MRI procedures in the past where you received a GBCA. Your healthcare provider may ask you for more information including the dates of these MRI procedures.
- have kidney problems, diabetes, or high blood pressure.
- have had an allergic reaction to dyes (contrast agents) including GBAs.
- are pregnant or plan to become pregnant. It is not known if AMBELVIST can harm your unborn baby. Talk to your healthcare provider about the possible risks to an unborn baby if a GBCA such as AMBELVIST is received during pregnancy.

What are the possible side effects of AMBELVIST?

- See “What is the most important information I should know about AMBELVIST?”
- **Allergic reactions. AMBELVIST can cause allergic reactions that can sometimes be serious. Your healthcare provider will monitor you closely for symptoms of an allergic reaction.**

The most common side effects of AMBELVIST include:

- | | |
|---------------------------|---------------|
| • dizziness | • vomiting |
| • headache | • feeling hot |
| • injection site reaction | • tingling |
| • nausea | • itchy skin |

These are not all the possible side effects of AMBELVIST. Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

General information about the safe and effective use of AMBELVIST.

Medicines are sometimes prescribed for purposes other than those listed in a Medication Guide. You can ask your healthcare provider for information about AMBELVIST that is written for health professionals.

What are the ingredients in AMBELVIST?

Active ingredient: gadoquatane

Inactive ingredients: calcobutrol, sodium chloride, trometamol, hydrochloric acid (for pH adjustment) and water for injection

Manufactured for Bayer HealthCare Pharmaceuticals Inc.

Manufactured in Germany © 2026

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For more information, go to www.ambelvist.com or call 1-888-842-2937.

This Medication Guide has been approved by the U.S. Food and Drug Administration.

Issued: 6/2026

LOT MA25BA1

Ambelvist®

0.1 mmol/mL 2 mL

NDC 50419-321-01

Ambelvist®
(gadoquatane)
injection

0.2 mmol/2 mL
(0.1 mmol/mL)

2 mL

LOT

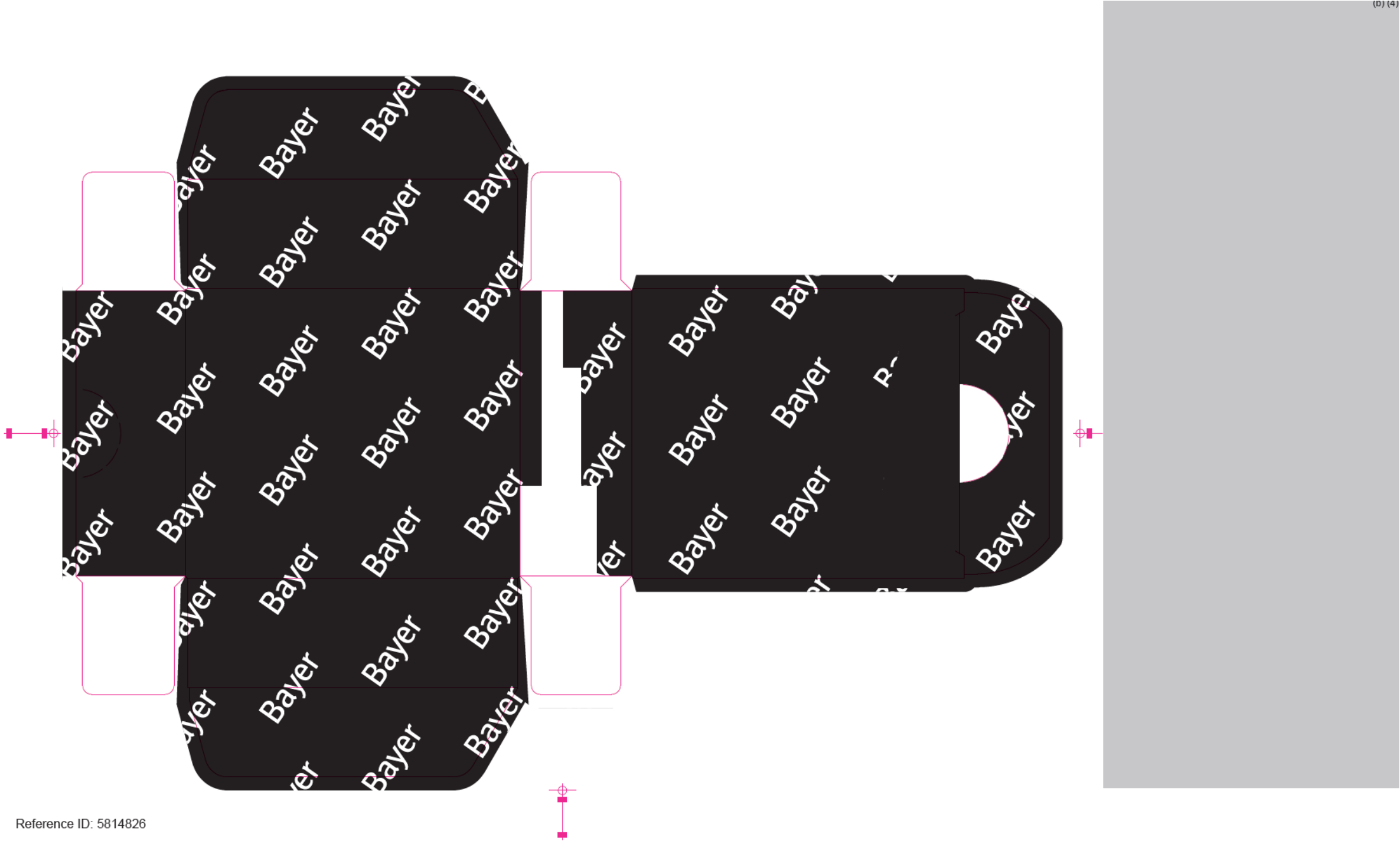
EXP



Intravenous use.
Single-Dose Vial.
Discard Unused Portion.
Mfd for: Bayer HealthCare
Pharmaceuticals Inc.
Rx only



91629512



NDC 50419-322-01

Ambelvist®
(gadoxetate) injection
0.75 mmol/7.5 mL
(0.1 mmol/mL)

LOT

MA25BA1

EXP

YYYY/MMM

For Intravenous Administration

Single-dose vial. Discard unused portion.

Mfd. for: Bayer HealthCare Pharmaceuticals Inc.

Whippany, NJ 07981

Mfd. in Germany

7.5 mL

Rx only

sterile solution



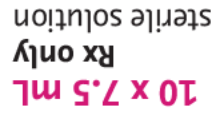
91629490

(b) (4)

A schematic diagram of a series circuit. It consists of a battery (represented by two cells), a switch, and a light bulb (represented by a circle with a cross inside) connected in a single loop. The circuit is shown as a horizontal line with a vertical line intersecting it at the right end, forming a square loop.

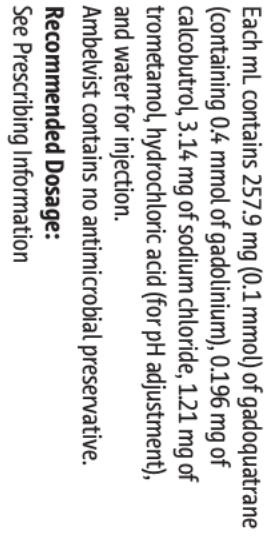


10 x 7.5 mL
Rx only
sterile solution



Bayer

Ambelvist[®]
(gadoquatrane) injection
0.75 mmol/7.5 mL
(0.1 mmol/mL)



See Prescribing Information



10 x 7.5 mL
Rx only
sterile solution

LOT



Ambelvist[®]
(gadoquatrane) injection
0.75 mmol/7.5 mL
(0.1 mmol/mL)

For Intravenous Administration
Single-dose vials.
Discard unused portion.
Dispense the enclosed Medication Guide to each patient

10 x 7.5 mL
Rx only
sterile solution





NDC 50419-323-01

Ambelvist®

(gadoquatrane) injection

1 mmol/10 mL
(0.1 mmol/mL)

LOT

MA25BA1

EXP

YYYY/MMM

For Intravenous Administration

Single-dose vial. Discard unused portion.

Mfd. for: Bayer HealthCare Pharmaceuticals Inc.

Whippany, NJ 07981

Mfd. in Germany

10 mL

Rx only

sterile solution



91629423

(b) (4)

Ambelvist[®]
(gadoquatrane) injection
1 mmol/10 mL
(0.1 mmol/mL)



Ambelvist[®]
(gadoquatran) injection
1 mmol/10 mL
(0.1 mmol/mL)

Each mL contains 257.9 mg (0.1 mmol) of gadopentate trisodium (containing 0.4 mmol of gadolinium), 0.96 mg of calcium chloride, 3.14 mg of sodium chloride, 1.21 mg of trometamol, hydrochloric acid (for pH adjustment), and water for injection.

Store at 25°C (77°F); excursions permitted to 15°C to 30°C (59°F to 86°F) [see USP Controlled Room Temperature].

Manufactured for:
Bayer Healthcare Pharmaceuticals Inc.
Whippany, NJ 07981
Manufactured in Germany

10 x 10 mL
Rx only
sterile solution
Bayer

Ambelvist®
(gadoquatrane) injection
1 mmol/10 mL
(0.1 mmol/mL)



NDC 50419-323-11



Ambelvist[®] (gadodiquatran) injection
1 mmol/10 mL
(0.1 mmol/mL)

LOT	EXP
MA25BA1	YYYY/MMMM



Ambelvist[®]
(gadoquatrane) injection
1 mmol/10 mL
(0.1 mmol/mL)

For Intravenous Administration
Single-dose vials.
Discard unused portion.
Dispense the enclosed Medication Guide to each patient

10 x 10 mL
Rx only
sterile solution





NDC 50419-324-01

Ambelvist[®]
(gadoquatrane) injection
1.5 mmol/15 mL
(0.1 mmol/mL)

LOT

MA25BA1

EXP

YYYY/MMM

For Intravenous Administration

Single-dose vial. Discard unused portion.

Mfd. for: Bayer HealthCare Pharmaceuticals Inc.

Whippany, NJ 07981

Mfd. in Germany



15 mL
Rx only
sterile solution



91629458

(b) (4)

(b) (4)



BAG
9102046
21.06.26

(b) (4)

LOT

MA25BA1

EXP

YYYY/MMM

NDC 50419-330-01

Ambelvist®
(gadoquatane) injection
0.75 mmol/7.5 mL
(0.1 mmol/mL)

For Intravenous Administration
Single-dose syringe. Discard
unused portion and syringe.
Recommended Dosage:
See Prescribing Information

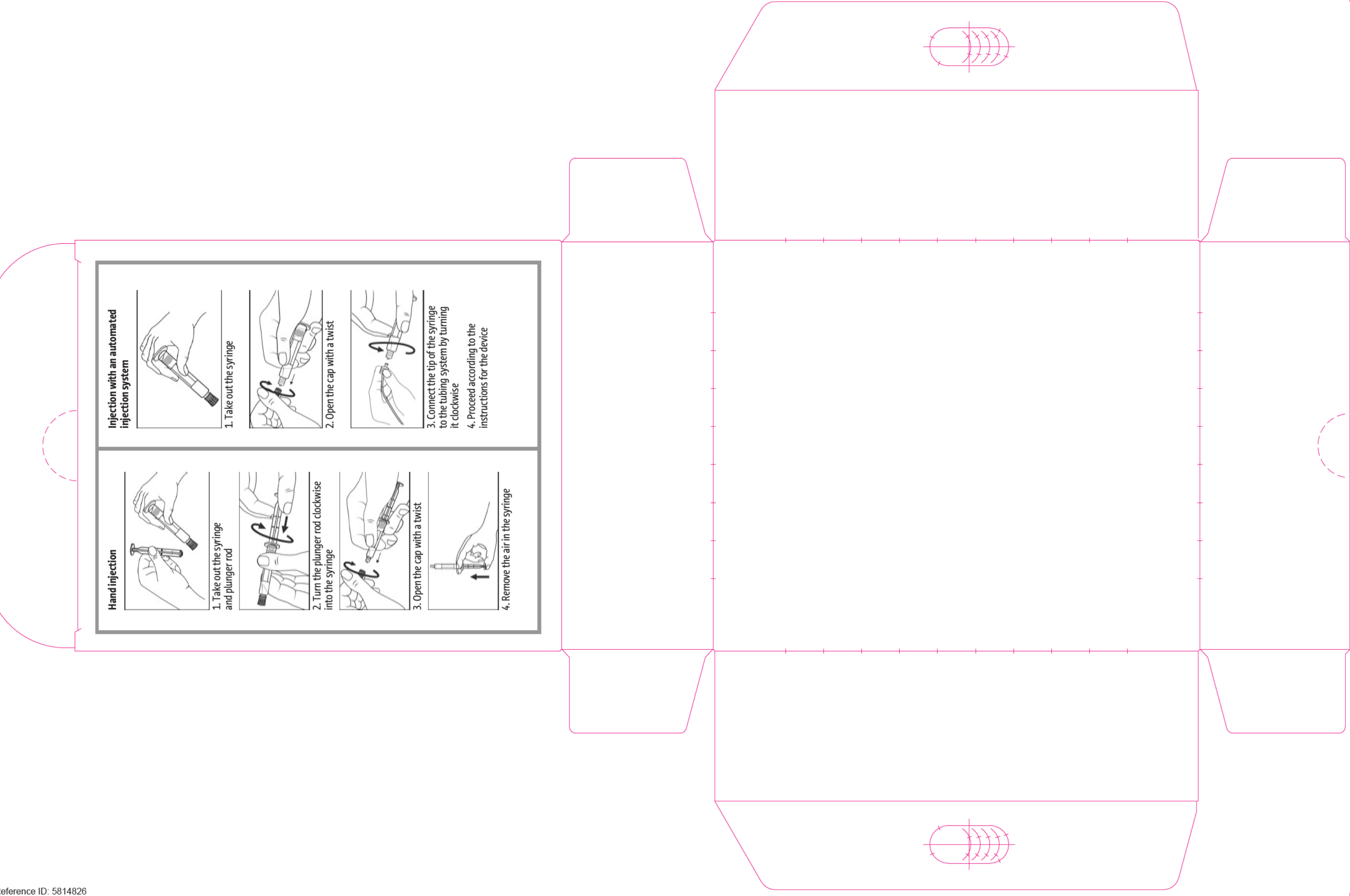


(01) 50419-330-012

MEDICATION AND FLUID PATH
ARE STERILE. Store at 25°C (77°F);
excursions permitted to 15°C to 30°C
(59°F to 86°F). [See USP Controlled
Room Temperature].
Manufactured for:
Bayer Healthcare Pharmaceuticals Inc.
Whippany, NJ 07981
Manufactured in Germany

7.5 mL
Rx only
sterile solution

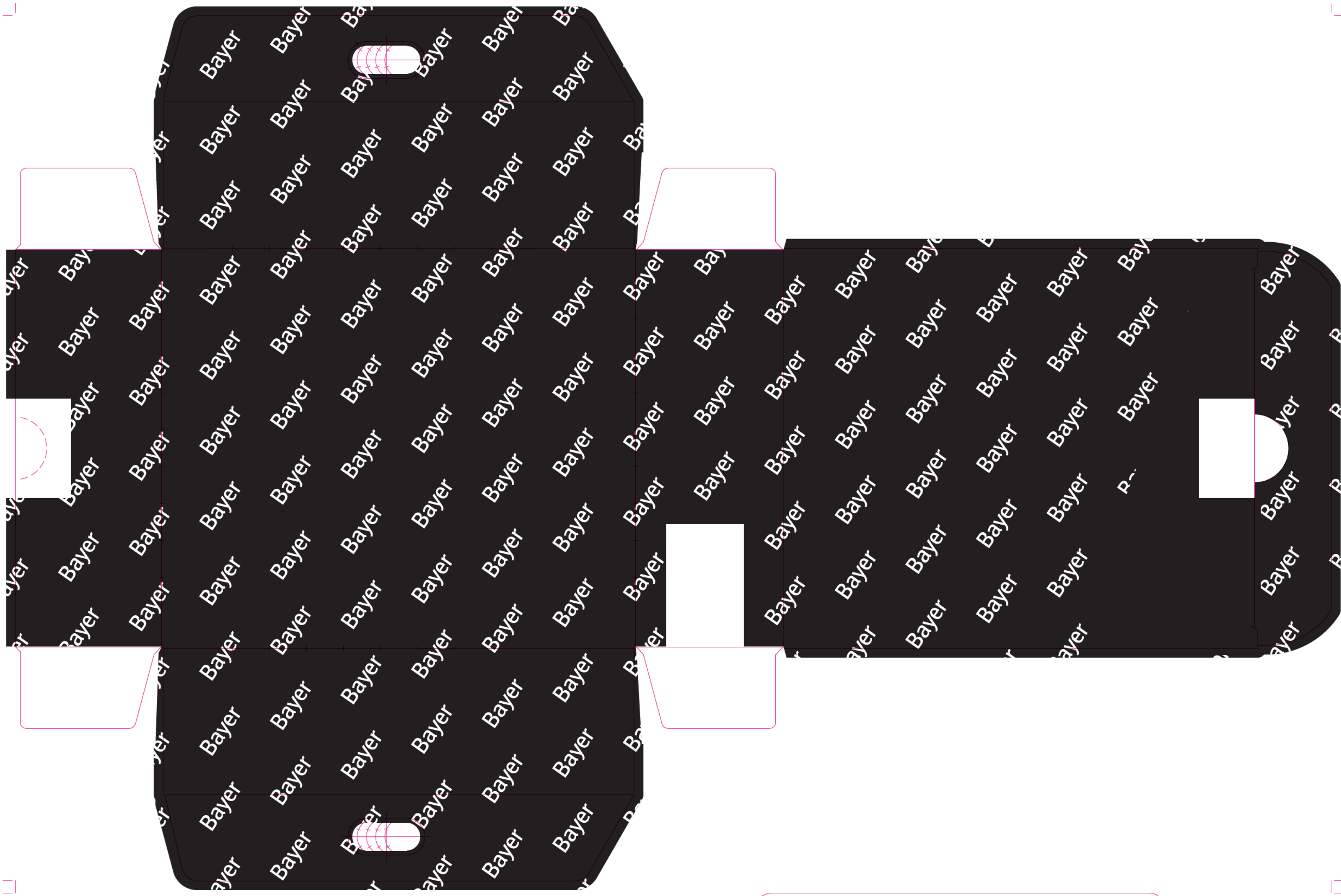
91629024



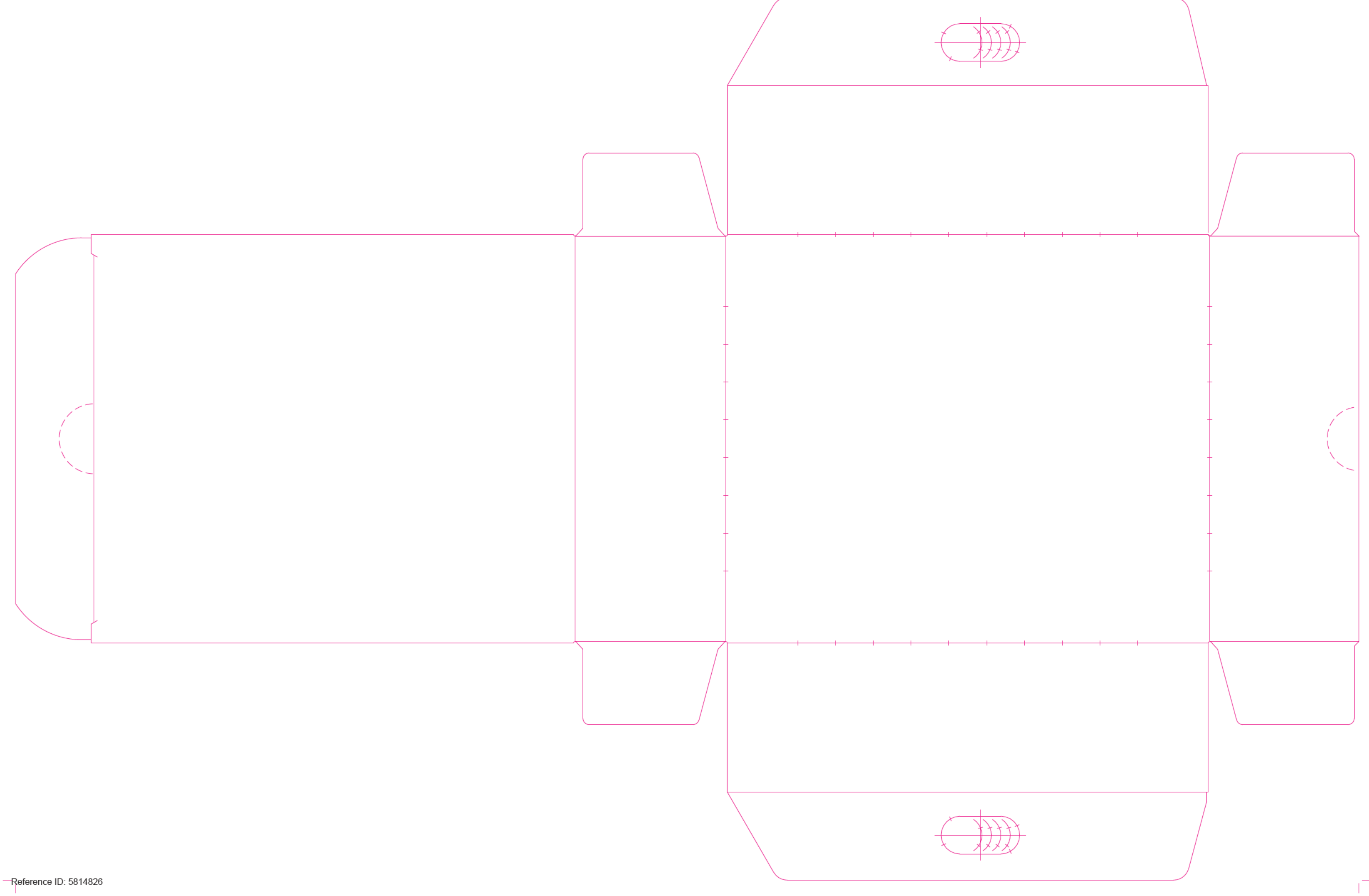
Rückseite / Rear



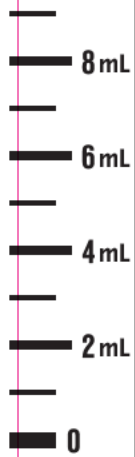
Vorderseite / Front



Vorderseite / Front



Rückseite / Rear



LOT
MA25BA1

EXP
YYYY/MMM

NDC 50419-331-01

Ambelvist®
(gabiquatran) injection
1 mmol/10 mL
(0.1 mmol/mL)

For Intravenous Administration
Single-dose syringe.
Discard unused portion and
syringe.
Recommended Dosage:
See Prescribing Information



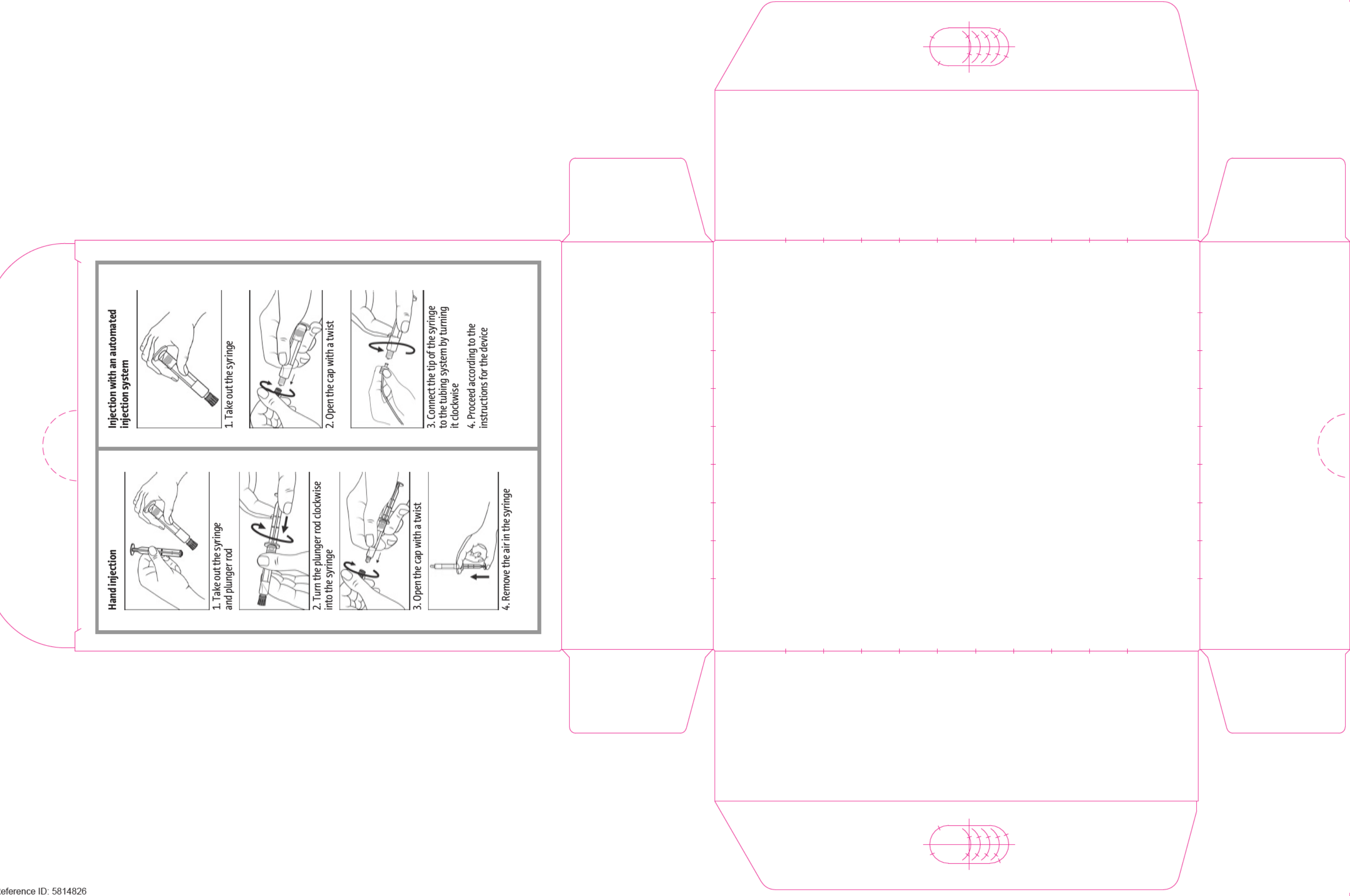
(01)40350/41.9331019

MEDICATION AND FLUID PATH
ARE STERILE. Store at 25°C (77°F);
excursions permitted to 15°C to 30°C
(59°F to 86°F). *See USP Controlled
Room Temperature.*
Manufactured for:
Bayer Healthcare Pharmaceuticals Inc.
Whippany, NJ 07981
Manufactured in Germany

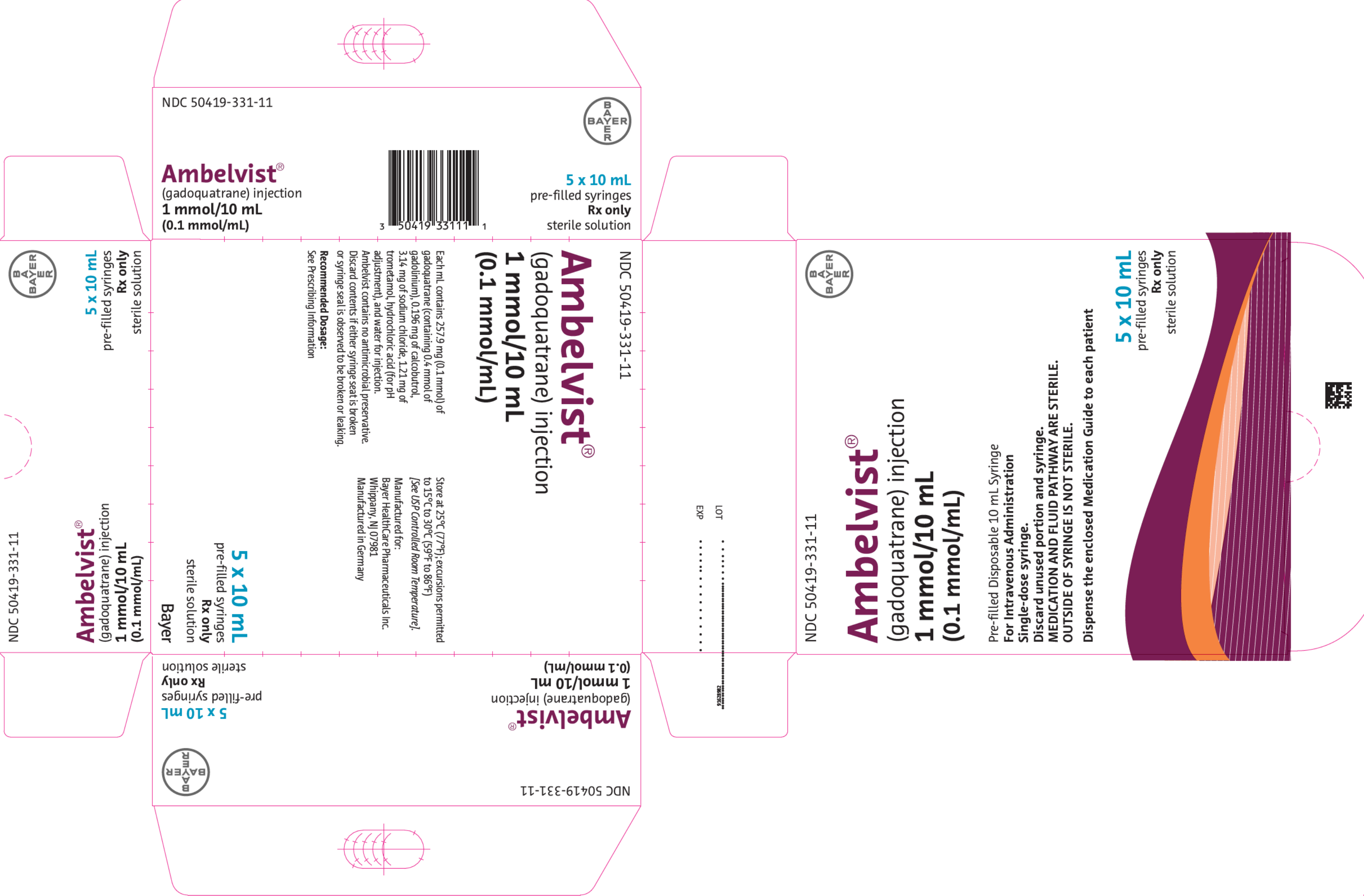


10 mL
Rx only
sterile solution

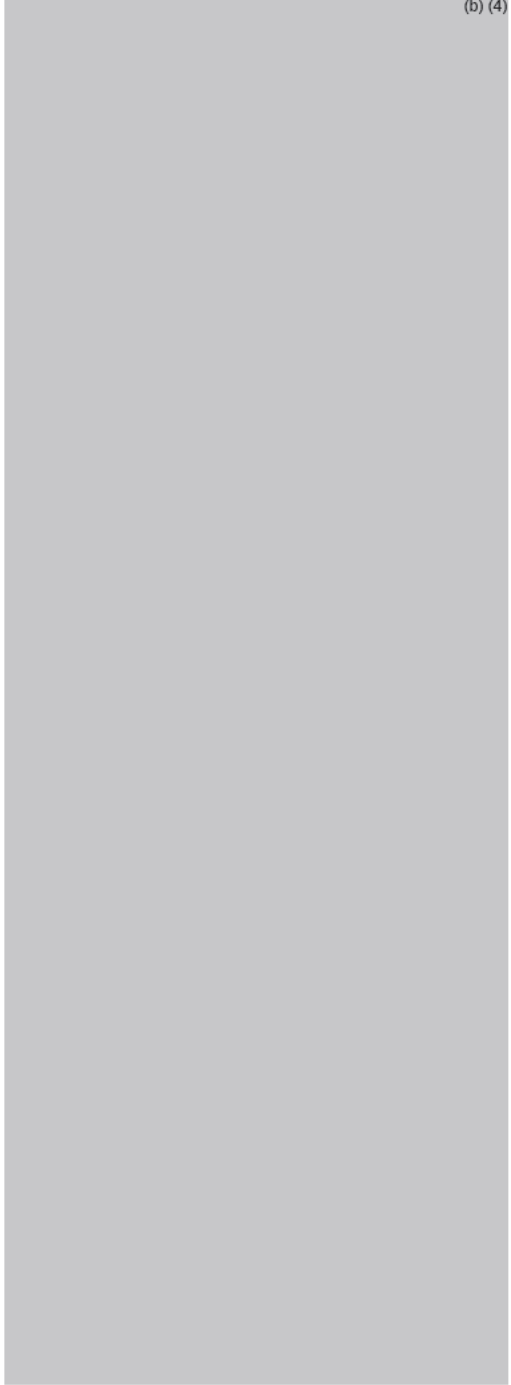
91628966

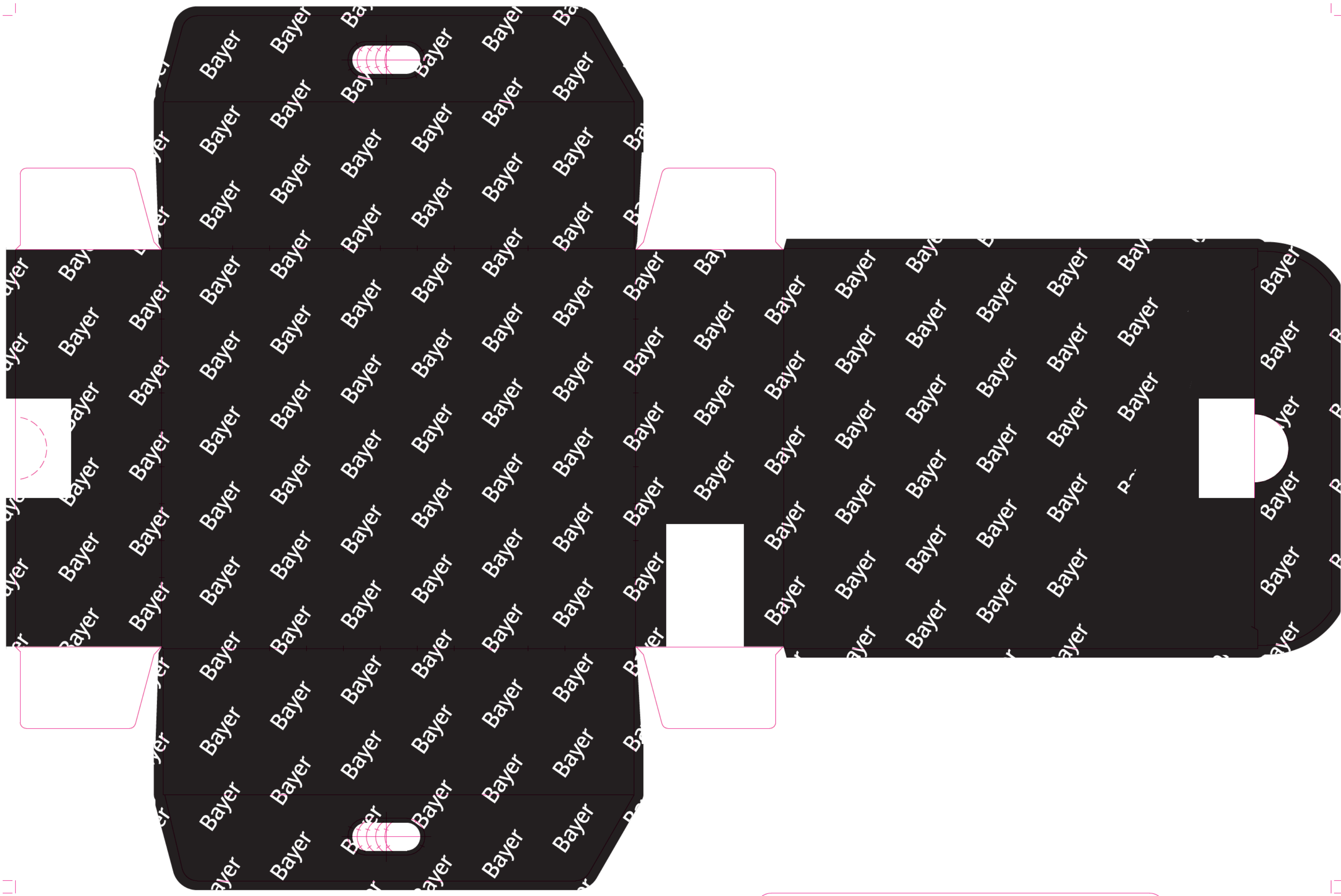


Rückseite / Rear

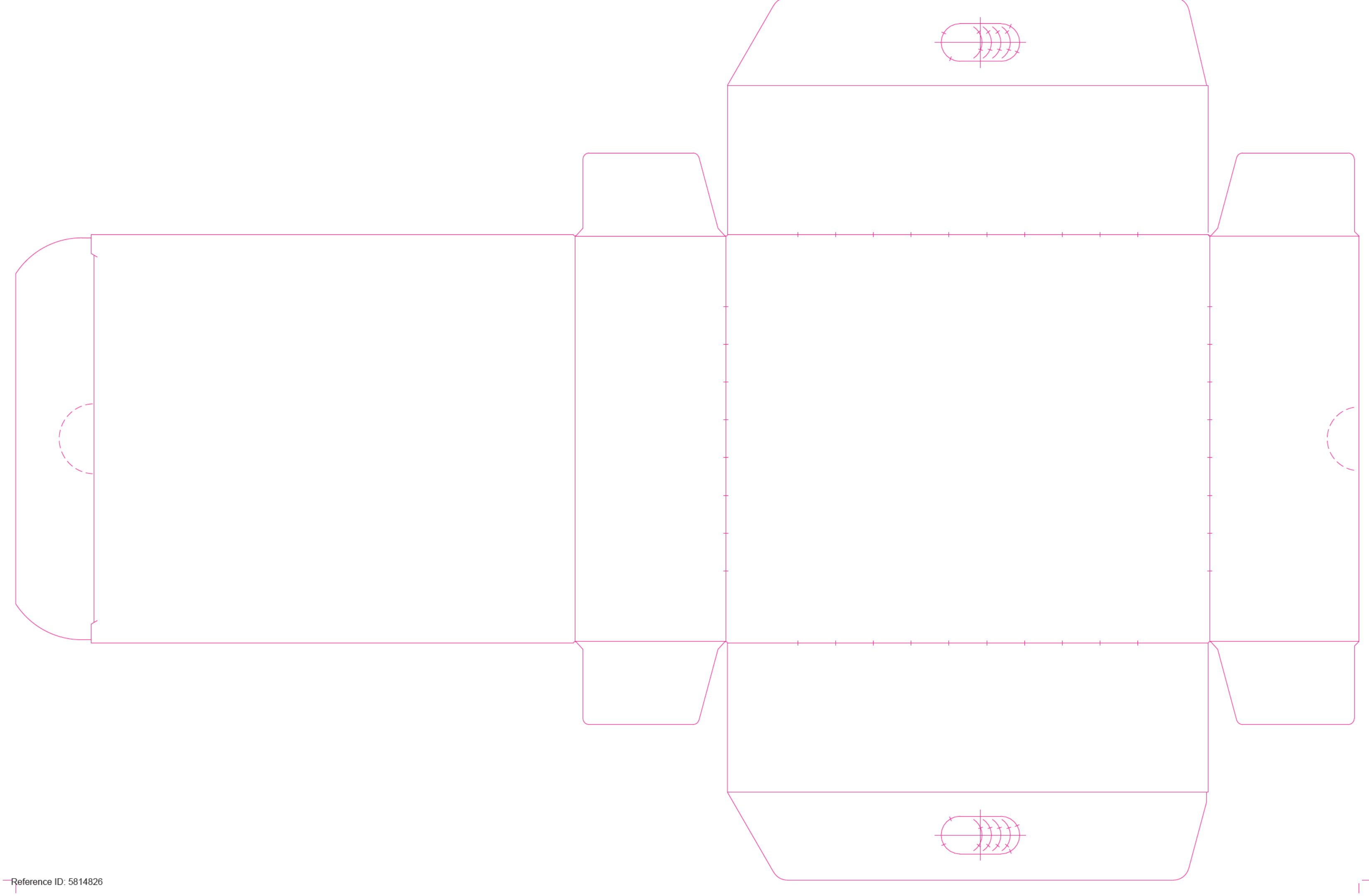


Vorderseite / Front





Vorderseite / Front



Rückseite / Rear



LOT

MA25BA1

EXP

YYYY/MMM

NDC 50419-332-01

Ambelvist®
(gadoquatrane) injection
1.5 mmol/15 mL
(0.1 mmol/mL)

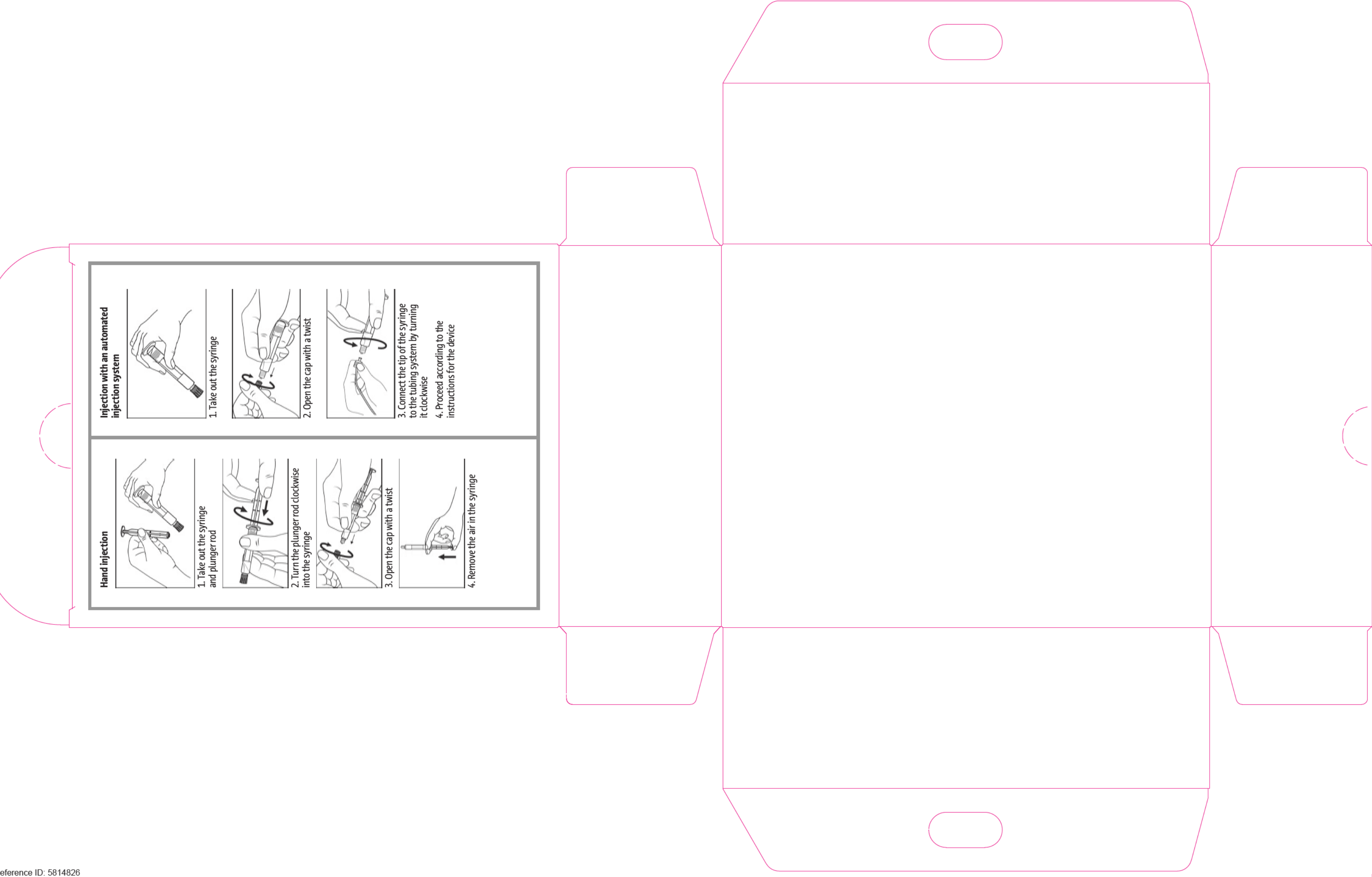
For Intravenous Administration
Single-dose syringe. Discard
unused portion and syringe.
Recommended Dosage:
See Prescribing Information



MEDICATION AND FLUID PATH
ARE STERILE. Store at 25°C (77°F);
excursions permitted to 15°C to 30°C
(59°F to 86°F) (see USP Controlled
Room Temperature).
Manufactured for:
Bayer HealthCare Pharmaceuticals Inc.
Whippany, NJ 07981
Manufactured in Germany

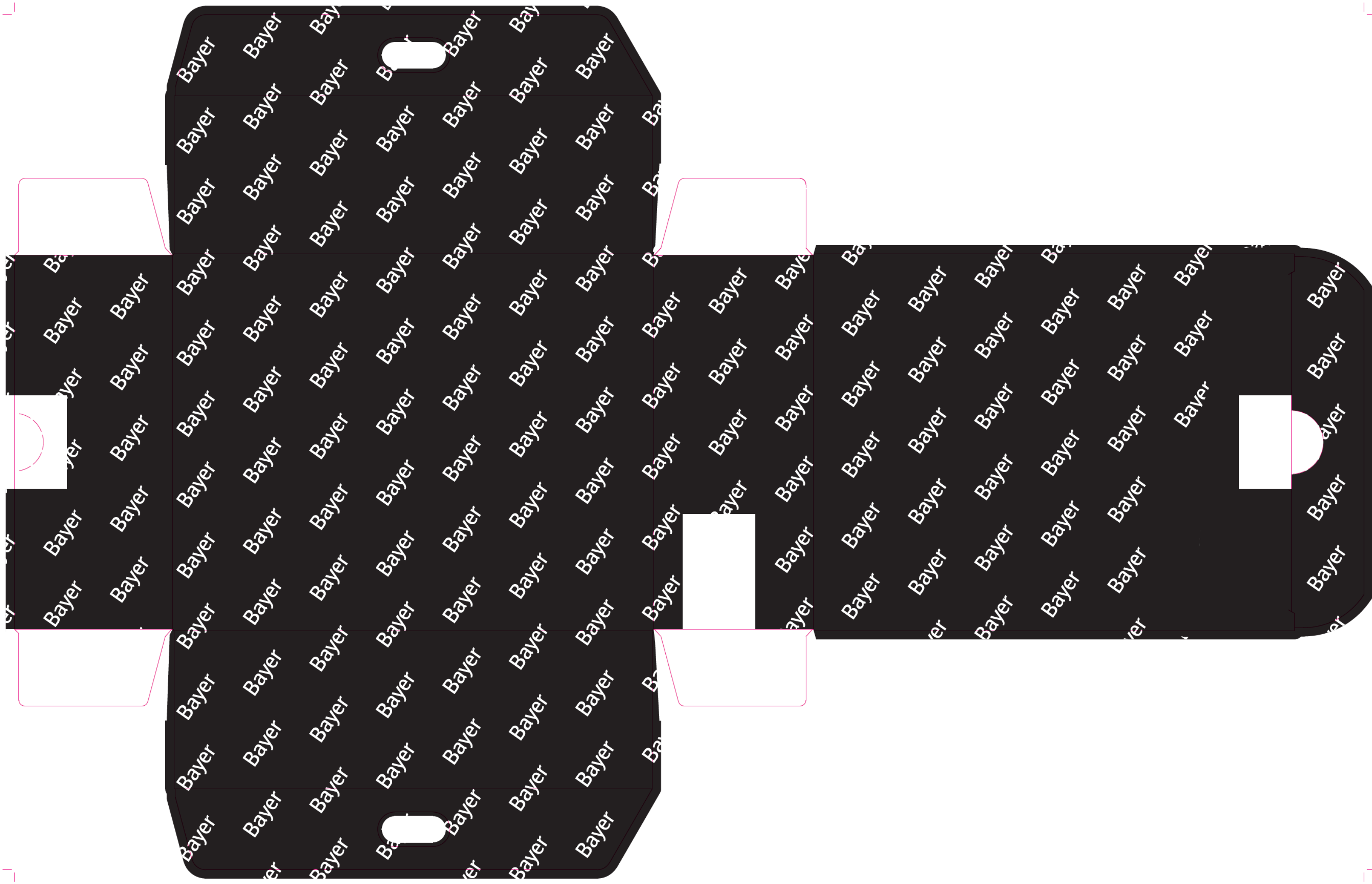
15 mL
Rx only
sterile solution

91628990

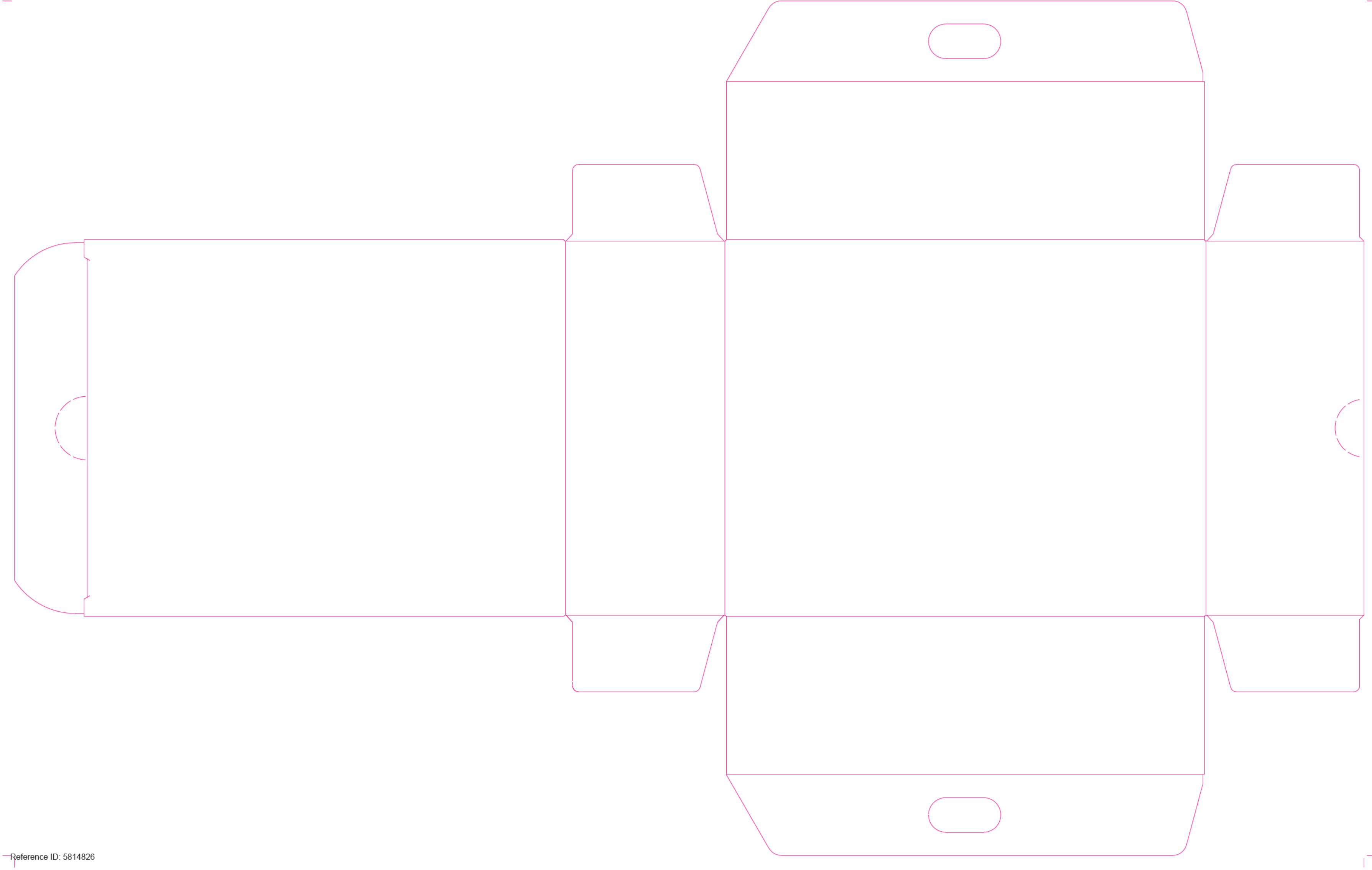


Rückseite / Rear

Vorderseite / Front



Vorderseite / Front



Rückseite / Rear

MAZ5BA1
LOT
MAZ5BA1
3 mmol/30 mL
(0.1 mmol/mL)

MAZ5BA1
LOT
MAZ5BA1
3 mmol/30 mL
(0.1 mmol/mL)

MAZ5BA1
LOT
MAZ5BA1
3 mmol/30 mL
(0.1 mmol/mL)

MAZ5BA1
LOT
MAZ5BA1
3 mmol/30 mL
(0.1 mmol/mL)

MAZ5BA1

YYYY/MM

LOT

EXP

NDC 50419-326-01

Ambelvist®
(gadodiquatrate) injection
3 mmol/30 mL
(0.1 mmol/mL)

Imaging Bulk Package -
Not for Direct Infusion

For Intravenous Use Only
Discard 6 hours after initial puncture.

Discard after ____/____/____
at ____:____

Recommended Dosage:
See Prescribing Information
Store at 25°C (77°F); excursions
permitted to 15°C to 30°C (59°F to 86°F)
[See USP Controlled Room Temperature].



For use only with an automated contrast injection system, contrast management system, or contrast media transfer set approved or cleared for use with this contrast agent in this Imaging Bulk Package. See drug and device labeling for information on devices indicated for use with this Imaging Bulk Package and techniques to help assure safe use.

Each mL contains 257.9 mg (0.1 mmol) of gadodiquatrate (containing 0.4 mmol of gadolinium), 0.196 mg of calcein, 3.14 mg of sodium chloride, 1.21 mg of trometamol, hydrochloric acid (for pH adjustment), and water for injection.

Mfd. for:
Bayer HealthCare
Pharmaceuticals Inc.
Whippany, NJ 07981
Mfd. in Germany

30 mL
Rx only
sterile solution

91629474



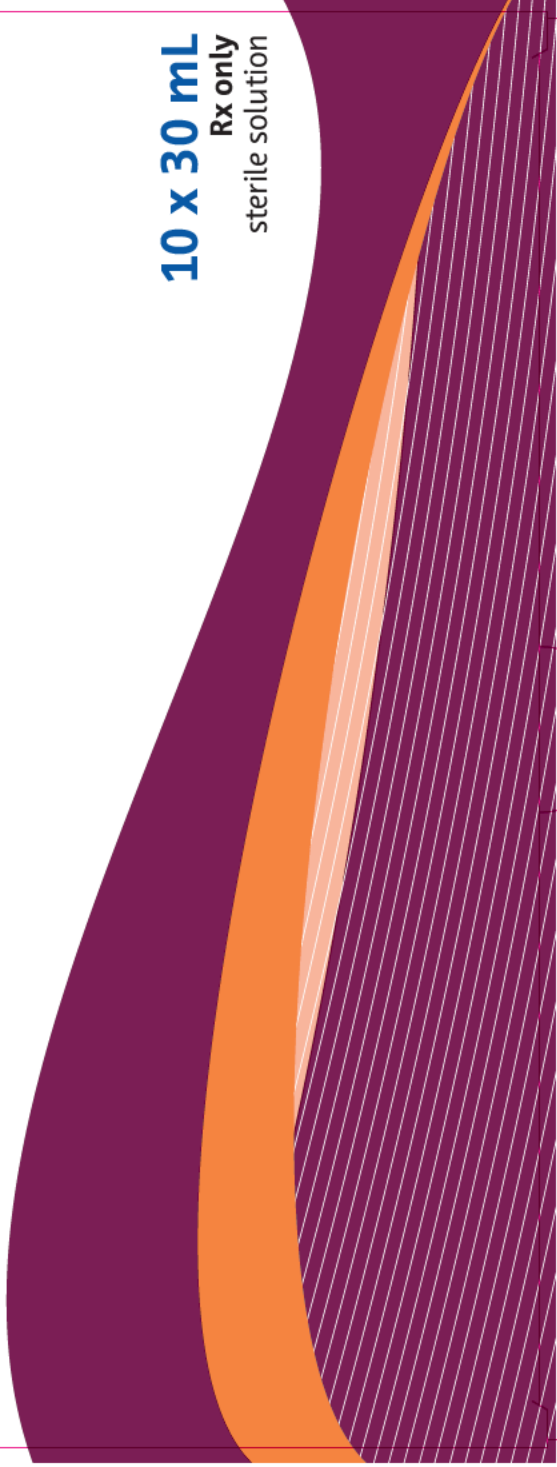
50419 32611 7

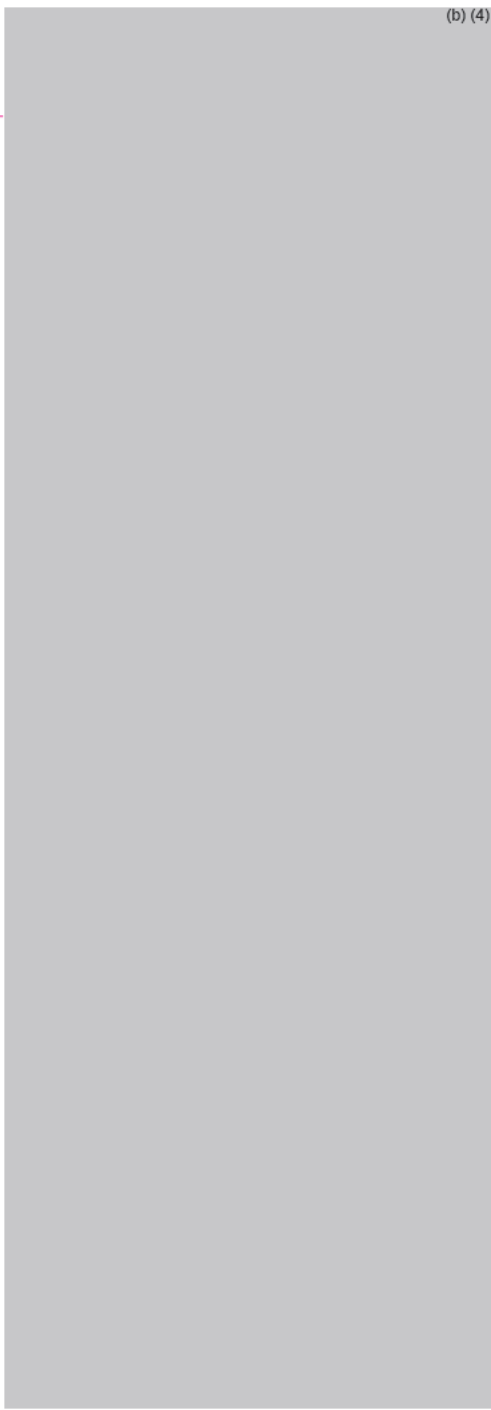
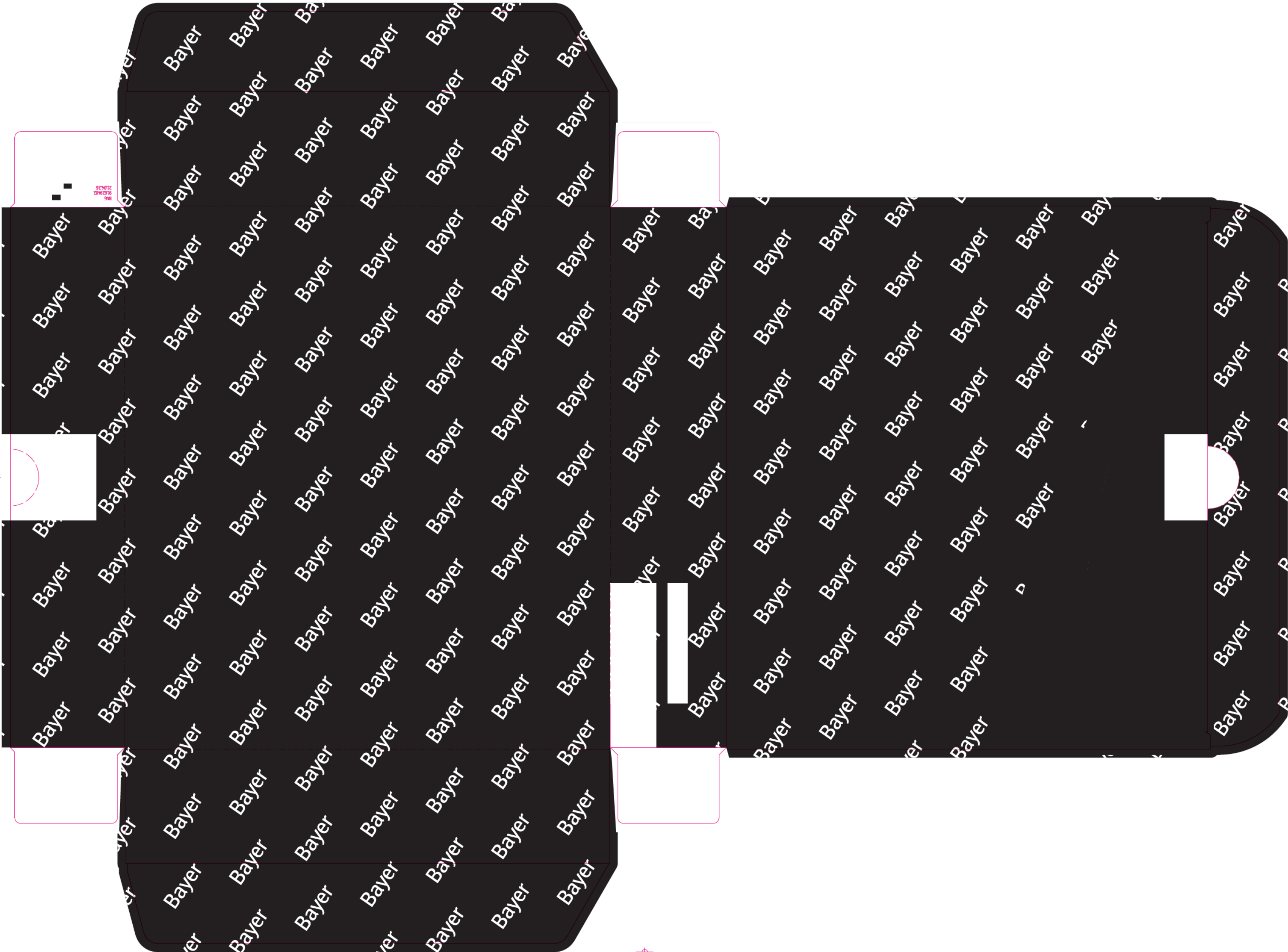
10 x 30 mL
Rx only
sterile solution



91629482

10 x 30 mL
Rx only
sterile solution





(b) (4)

Ambelvist®
6.5 mmol/65 mL (0.1 mmol/mL)
LOT MA25BA1

Ambelvist®
6.5 mmol/65 mL (0.1 mmol/mL)
LOT MA25BA1

Ambelvist®
6.5 mmol/65 mL (0.1 mmol/mL)
LOT MA25BA1

Ambelvist®
6.5 mmol/65 mL (0.1 mmol/mL)
LOT MA25BA1

Ambelvist®
6.5 mmol/65 mL (0.1 mmol/mL)
LOT MA25BA1

Ambelvist®
6.5 mmol/65 mL (0.1 mmol/mL)
LOT MA25BA1

Ambelvist®
6.5 mmol/65 mL (0.1 mmol/mL)
LOT MA25BA1

Ambelvist®
6.5 mmol/65 mL (0.1 mmol/mL)
LOT MA25BA1

MA25BA1 YYY/YYY/MMM

LOT EXP

NDC 50419-327-01

Ambelvist®

(gadoxetate) injection

6.5 mmol/65 mL
(0.1 mmol/mL)

**Imaging Bulk Package –
Not for Direct Infusion**

For Intravenous Use Only
Discard 6 hours after initial puncture.

Discard after ____ / ____ / ____
at ____ : ____

Recommended Dosage:

See Prescribing Information.

Store at 25°C (77°F); excursions
permitted to 15°C to 30°C (59°F to 86°F)
[See USP Controlled Room Temperature].



For use only with an automated contrast injection system,
contrast management system, or contrast media transfer
set approved or cleared for use with this contrast agent
in this Imaging Bulk Package.

See drug and device labeling for information on devices
indicated for use with this Imaging Bulk Package and
techniques to help assure safe use.

Each mL contains 257.9 mg (0.1 mmol) of gadoxetate
(containing 0.4 mmol of gadolinium), 0.196 mg of calcitonin,
3.14 mg of sodium chloride, 1.21 mg of trometamol,
hydrochloric acid (for pH adjustment), and water for injection.

Mfd. for:

Bayer HealthCare Pharmaceuticals Inc.

Whippany, NJ 07981

Mfd. in Germany

65 mL

Rx only
sterile solution

91629377

NDC 50419-327-11

Ambelvist®

(gadoxetate) injection

6.5 mmol/65 mL

(0.1 mmol/mL)



**Imaging Bulk Package –
Not for Direct Infusion**

For Intravenous Use Only

Discard 6 hours after initial puncture.

**Dispense the enclosed Medication Guide to
each patient**

For use only with an automated contrast
injection system, contrast management system,
or contrast media transfer set approved or
cleared for use with this contrast agent in
this Imaging Bulk Package.

See drug and device labeling for information
on devices indicated for use with this Imaging
Bulk Package and techniques to help assure safe use.

Recommended Dosage:

See Prescribing Information.

Each mL contains 257.9 mg (0.1 mmol) of
gadoxetate (containing 0.4 mmol of
gadolinium), 0.196 mg of calcibutrol, 3.14 mg
of sodium chloride, 1.21 mg of trometamol,
hydrochloric acid (for pH adjustment),
and water for injection.

Ambelvist contains no antimicrobial preservative.

Store at 25°C (77°F); excursions permitted to
15°C to 30°C (59°F to 86°F)

[See USP Controlled Room Temperature].

Manufactured for:

Bayer HealthCare Pharmaceuticals Inc.

Whippany, NJ 07981

Manufactured in Germany

MA25BA1

LOT

YYYY/MMM

EXP

91629385

10 x 65 mL

Rx only
sterile solution

Bayer

Ambelvist® 3 mmol/30 mL
(0.1 mmol/mL)

LOT MA25BA1

Ambelvist® 3 mmol/30 mL
(0.1 mmol/mL)

LOT MA25BA1

Ambelvist® 3 mmol/30 mL
(0.1 mmol/mL)

LOT MA25BA1

Ambelvist® 3 mmol/30 mL
(0.1 mmol/mL)

LOT MA25BA1

MA25BA1

YYYY/MMMM

LOT

EXP

NDC 50419-328-01

Ambelvist®
(gadoquatrane) injection
3 mmol/30 mL
(0.1 mmol/mL)

**Pharmacy Bulk Package –
Not for Direct Infusion**

For Intravenous Use Only
Discard 6 hours after initial puncture.

Discard after ____/____/____
at ____:____



(01)10350419328019



Recommended Dosage:
See Prescribing Information

Each mL contains 257.9 mg (0.1 mmol) of gadoquatrane (containing 0.4 mmol of gadolinium), 0.196 mg of calcein, 3.14 mg of sodium chloride, 1.21 mg of trometamol, hydrochloric acid (for pH adjustment), and water for injection.

Store at 25°C (77°F); excursions permitted to 15°C to 30°C (59°F to 86°F) [See USP Controlled Room Temperature].

Manufactured for:
Bayer HealthCare Pharmaceuticals Inc.
Whippany, NJ 07981
Manufactured in Germany

30 mL
Rx only
sterile solution

91940269



10 x 30 mL
Rx only
sterile solution

**Pharmacy Bulk Package -
Not for Direct Infusion**

NDC 50419-328-11

Ambelvist®
(gadoquatrane) injection
3 mmol/30 mL
(0.1 mmol/mL)

Ambelvist®
(gadoquatrane) injection
3 mmol/30 mL
(0.1 mmol/mL)



10 x 30 mL
Rx only
sterile solution



NDC 50419-328-11

Ambelvist[®]
(gadoquatrane) injection
3 mmol/30 mL
(0.1 mmol/mL)

**For Intravenous
Use Only**

Recommended Dosage: See Prescribing Information

Recommended Dosage: See Prescribing Information

Each mL contains 257.9 mg (0.1 mmol) of gadodiamide (containing 0.4 mmol of gadolinium), 0.136 mg of calcium chloride, 3.14 mg of sodium chloride, 1.21 mg of trometamol, hydrochloric acid (for pH adjustment), and water for injection.

Ambelweist contains no antimicrobial preservative.

Store at 25°C (77°F); excursions permitted to 15°C to 30°C (59°F to 86°F)

[see USP Controlled Room Temperature].

Manufactured for:
Bayer Healthcare Pharmaceuticals Inc.
Whispery, NJ 07981

Manufactured in Germany

10 x 30 mL
Rx only
sterile solution
Bayer



Pharmacy Bulk Package – Not for Direct Infusion

91940242

LOT	EXP
MA25BA1	YYYY/MMM

NDC 50419-328-11



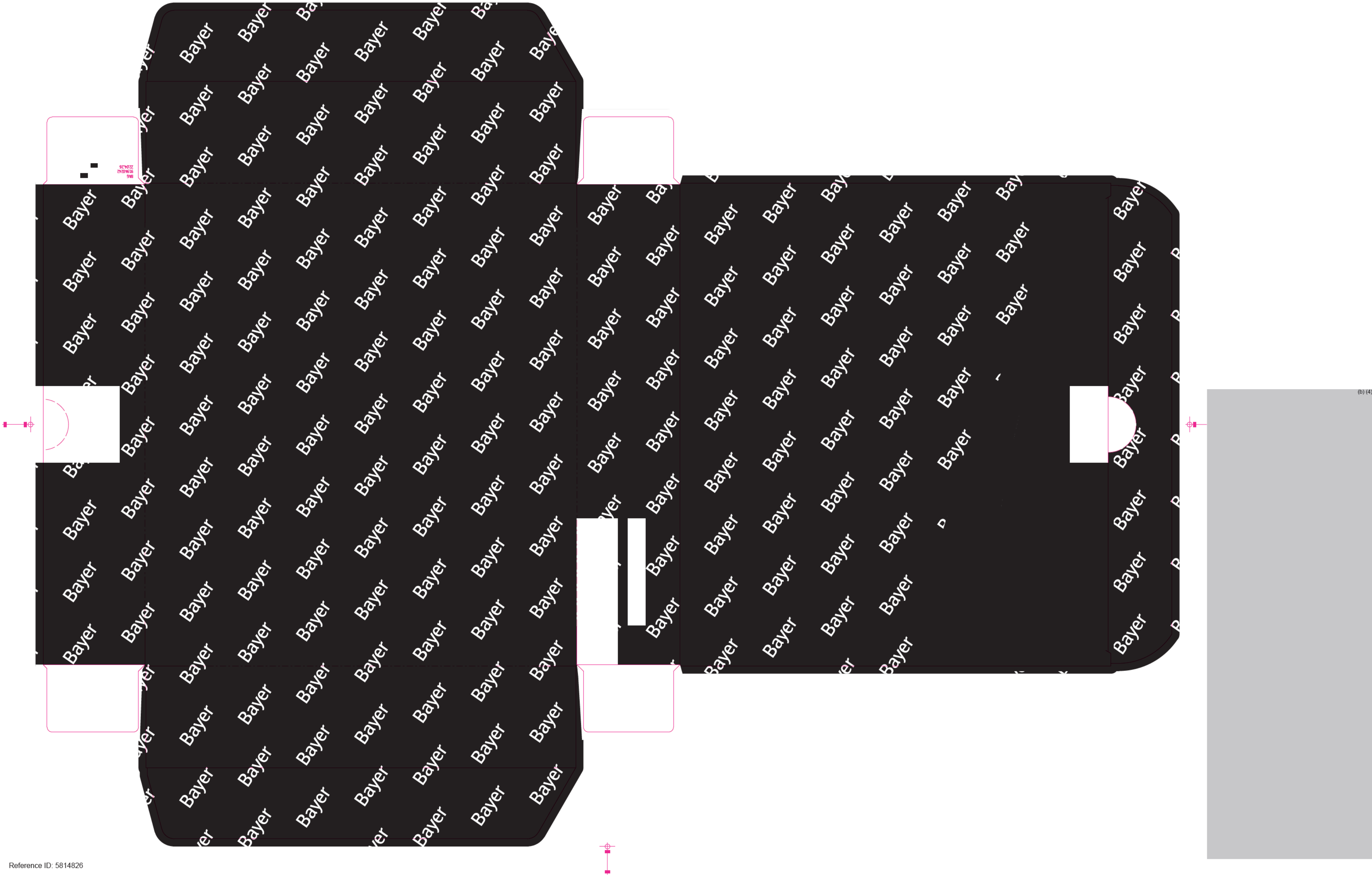
Ambelvist®
(gadoquatrane) injection
3 mmol/30 mL
(0.1 mmol/mL)

Pharmacy Bulk Package – Not for Direct Infusion

Discard 6 hours after initial puncture.
Dispense the enclosed Medication Guide to each patient

10 x 30 mL
Rx only
sterile solution





945
29.04.22
22.04.26

(b) (4)

Ambelvist®
6.5 mmol/65 mL (0.1 mmol/mL)
LOT MA25BA1

Ambelvist®
6.5 mmol/65 mL (0.1 mmol/mL)
LOT MA25BA1

Ambelvist®
6.5 mmol/65 mL (0.1 mmol/mL)
LOT MA25BA1

Ambelvist®
6.5 mmol/65 mL (0.1 mmol/mL)
LOT MA25BA1

Ambelvist®
6.5 mmol/65 mL (0.1 mmol/mL)
LOT MA25BA1

Ambelvist®
6.5 mmol/65 mL (0.1 mmol/mL)
LOT MA25BA1

Ambelvist®
6.5 mmol/65 mL (0.1 mmol/mL)
LOT MA25BA1

Ambelvist®
6.5 mmol/65 mL (0.1 mmol/mL)
LOT MA25BA1

MA25BA1 YYY/MMM EXP
LOT

NDC 50419-329-01

Ambelvist®
(gadodiatrate) injection
6.5 mmol/65 mL
(0.1 mmol/mL)

**Pharmacy Bulk Package –
Not for Direct Infusion**

For Intravenous Use Only
Discard 6 hours after initial puncture.

Discard after ____ / ____ / ____
at ____ : ____



Recommended Dosage:
See Prescribing Information.

Each mL contains 257.9 mg (0.1 mmol) of gadodiatrate
(containing 0.4 mmol of gadolinium), 0.196 mg of
calcibutrol, 3.14 mg of sodium chloride, 1.21 mg of
trometamol, hydrochloric acid (for pH adjustment),
and water for injection.

Store at 25°C (77°F); excursions
permitted to 15°C to 30°C (59°F to 86°F)
[See USP Controlled Room Temperature].

Manufactured for:
Bayer HealthCare Pharmaceuticals Inc.
Whippany, NJ 07981
Manufactured in Germany

65 mL
Rx only
sterile solution

91940307

NDC 50419-329-11

Ambelvist®

(gadoquatrane) injection

6.5 mmol/65 mL

(0.1 mmol/mL)



Pharmacy Bulk Package –
Not for Direct Infusion

For Intravenous Use Only

Discard 6 hours after initial puncture.

Dispense the enclosed Medication Guide to
each patient

Recommended Dosage:

See Prescribing Information.

Each mL contains 257.9 mg (0.1 mmol) of
gadoquatrane (containing 0.4 mmol of
gadolinium), 0.196 mg of calcibutrol,
3.14 mg of sodium chloride, 1.21 mg of
trometamol, hydrochloric acid (for pH
adjustment), and water for injection.

Ambelvist contains no antimicrobial preservative.

Store at 25°C (77°F); excursions permitted to
15°C to 30°C (59°F to 86°F)

[See USP Controlled Room Temperature].

Manufactured for:
Bayer HealthCare Pharmaceuticals Inc.
Whippany, NJ 07981

Manufactured in Germany

MA25BA1

YYYY/MMM

LOT

EXP

91940293

10 x 65 mL

Rx only

sterile solution

Bayer

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/s/

AUGUST A HOFLING
06/12/2026 03:25:08 PM