

ARTWORK DESIGN STANDARD INSERT DOKTER

RIBAN 10, 15 & 20

Size (L x W) 610 x 210 mm

Material
HVS Paper 60g Yellow
Packsizes/Primary
Tablet Salut Selaput
Primary
Dus, 3 blister @ 10 tablet salut selaput
No. Reg
Box, 3 blisters @ 10 film coated tablets RIBAN 10, Reg. No. DKL2533318917C1
Box, 3 blisters @ 10 film coated tablets RIBAN 15, Reg. No. DKL2533318917B1
Box, 3 blisters @ 10 film coated tablets RIBAN 20, Reg. No. DKL2533318917A1

Front / Back	
Type Font	
Product Name	Another Font
Avenir Next, Bold	Arial Regular / Bold
8pt	5pt

	
16 x 4mm (LxH)	TEXT Black
Material Code	
IIN00401	

Note:

CHECKED & APPROVED BY				
R&D		RA		
Tgl:	Tgl:	Tgl:	Tgl:	Tgl:
Staff/SPV	Manager	Staff/SPV	Manager	Dir. Prod. Dev



PT. MERSIFARMA TIRMAKU MERCUSANA
DEPARTEMEN DESIGN & PACKAGING

Date of use: 07/01/2026

(DD-MM-YYYY)



Not at scale-Size in mm

RIBAN®
Rivaroxaban
Film Coated Tablet

WARNING: (A) PREMATURE DISCONTINUATION OF RIBAN INCREASES THE RISK OF THROMBOTIC EVENTS, (B) SPINAL/EPIDURAL HEMATOMA

A. PREMATURE DISCONTINUATION OF RIBAN INCREASES THE RISK OF THROMBOTIC EVENTS
Premature discontinuation of any oral anticoagulant, including Riban, increases the risk of thrombotic events, if anticoagulation with RIBAN is discontinued for a reason other than pathological bleeding or completion of a course of therapy, consider coverage with another anticoagulant (see **PHARMACOLOGY AND METHOD OF ADMINISTRATION**, and **WARNING AND PRECAUTION**).

B. SPINAL/EPIDURAL HEMATOMA
Epidural or spinal hematomas have occurred in patients treated with Riban who are receiving neuraxial anesthesia or undergoing spinal puncture. These hematomas may result in long-term or permanent paralysis. Consider these risks when scheduling patients for spinal procedures. Factors that can increase the risk of developing epidural or spinal hematomas in these patients include:

- use of indwelling epidural catheters
- concomitant use of other drugs that affect hemostasis, such as non-steroidal anti-inflammatory drugs (NSAIDs), platelet inhibitors, other anticoagulants
- a history of traumatic or repeated epidural or spinal punctures
- a history of spinal deformity or spinal surgery
- optimal timing between the administration of RIBAN and neuraxial procedures is not known (see **WARNING AND PRECAUTION AND SIDE EFFECTS**).

Monitor patients frequently for signs and symptoms of neurological impairment. If neurological compromise is noted, urgent treatment is necessary (see **WARNING AND PRECAUTION**). Consider the benefits and risks before neuraxial intervention on patients anticoagulated or to be anticoagulated for thromboprophylaxis (see **WARNING AND PRECAUTION**).

DRUG DESCRIPTION
RIBAN 10
Pink convex film coated tablet, diameter 5.7 mm, upper initial ml and lower initial blank.
RIBAN 15
Light brick red convex film coated tablet, diameter 6.0 mm, upper initial ml and lower initial blank.
RIBAN 20
Brick red convex film coated tablet, diameter 6.3 mm, upper initial ml and lower initial blank.

COMPOSITION
Each film coated tablet RIBAN 10 contains Rivaroxaban 10 mg
Each film coated tablet RIBAN 15 contains Rivaroxaban 15 mg
Each film coated tablet RIBAN 20 contains Rivaroxaban 20 mg

EXCIPIENTS
RIBAN 10
Microcrystalline cellulose, Lactose monohydrate, Croscarmellose sodium, Hypromellose, Sodium lauryl sulfate, Magnesium stearate, Bahan perylalut (Glycerol mono-dicaprylate, Macrogol polyvinyl alcohol grafted copolymer, Polyvinyl alcohol, Talc, Titanium dioxide, Eucroet brown HT, FD&C red no.40 lake), Purified water.

RIBAN 15
Microcrystalline cellulose, Lactose monohydrate, Croscarmellose sodium, Hypromellose, Sodium lauryl sulfate, Magnesium stearate, Bahan perylalut (Glycerol mono-dicaprylate, Macrogol polyvinyl alcohol grafted copolymer, Polyvinyl alcohol, Talc, Titanium dioxide, Eucroet brown HT, FD&C red no.40 lake), Purified water.

RIBAN 20
Microcrystalline cellulose, Lactose monohydrate, Croscarmellose sodium, Hypromellose, Sodium lauryl sulfate, Magnesium stearate, Bahan perylalut (Glycerol mono-dicaprylate, Macrogol polyvinyl alcohol grafted copolymer, Polyvinyl alcohol, Talc, Titanium dioxide, Eucroet brown HT, FD&C red no.40 lake), Purified water.

ACTIONS
Riban is a highly selective direct factor Xa inhibitor with oral bioavailability. Inhibition of Factor Xa interrupts the intrinsic and extrinsic pathways of the blood coagulation cascade, inhibiting both thrombin formation and development of thrombi. Rivaroxaban does not inhibit thrombin (activated Factor II) and no effects on platelets have been demonstrated.

PHARMACOKINETICS
Results: The main pharmacokinetic parameters of the test drug Rivaroxaban (BN: TP 23182/reference drug, Xarelto® (BN: BXJUGT1) ratio were as listed:

Parameters	T	R
AUC ₀₋₂₄ (ng.h/mL)	3,557.69 (880.88)	3,210.94 (740.89)
C _{max} (ng/mL)	469.81 (116.80)	423.96 (98.49)
AUC ₀₋₁₂ (ng.h/mL)	3,634.98 (899.96)	3,288.70 (781.17)
T _{max} (h)	4.00 (2.00-6.00)	3.50 (1.00-6.00)
T _{1/2} (h)	9.23 (3.83)	9.53 (3.65)

The bioequivalence rate extent of absorption was proven for both preparations by assessing geometric means and by statistical 90% Confidence Interval (CI) with α = 0.005.

INDICATIONS
• Prevention of venous thromboembolism (VTE) in adult patients undergoing elective hip or knee replacement surgery.
• Reduce the risk of stroke and systemic embolism in patients with nonvalvular atrial fibrillation:
- with previous history of stroke or TIA.
• With CHADS₂ score ≥ 2
• Treatment of Deep Vein Thrombosis (DVT) in which duration of treatment should be based on the underlying disease.
• Treatment of patients with haemodynamically stable pulmonary embolism (PE) which is must be confirmed by spiral CT imaging.

PHARMACOLOGY AND METHOD OF ADMINISTRATION
Posology
For prevention of venous thromboembolism (VTE) in adult patients undergoing elective hip or knee replacement surgery
The recommended dose is 10 mg Riban taken orally once daily. The initial dose should be taken 6 to 10 hours after surgery, provided that haemostasis has been established.
The duration of treatment depends on the individual risk of the patient for venous thromboembolism which is determined by the type of orthopaedic surgery.
• For patients undergoing major hip surgery, a treatment duration of 5 weeks is recommended.
• For patients undergoing major knee surgery, a treatment duration of 2 weeks is recommended.
Missed Dose
If a dose is missed the patient should take Riban immediately and then continue the following day with once daily intake as before.
To reduce the risk of stroke and systemic embolism in patients with nonvalvular atrial fibrillation:
• with previous history of stroke or TIA
• with CHADS₂ score ≥ 2
The recommended dose is 20 mg once daily, which is also the recommended maximum dose.
Therapy with Riban should be continued long term provided the benefit of reducing the risk of stroke and systemic embolism outweighs the risk of bleeding (see **WARNINGS AND PRECAUTIONS**).
If a dose is missed the patient should take Riban immediately and continue on the following day with the once daily intake as recommended. The dose should be doubled with the same day to make up for a missed dose.
For the treatment of Deep Vein Thrombosis (DVT) in which duration on treatment should be based on the underlying disease and the treatment of patients with haemodynamically stable pulmonary embolism (PE), the recommended dose for the initial treatment of acute DVT or PE is 15 mg twice daily for the first three weeks followed by 20 mg once daily for the continued treatment, as indicated in the table below.
Following completion of six to twelve months therapy, based on an individual assessment of the risk of recurrent DVT or PE against the risk for bleeding, dose reduction to 10 Riban once daily may be considered.

Time Period	Dosing schedule	Total Dosing
Day 1-21	15 mg twice daily	30 mg
Day 22 and onwards	20 mg once daily	20 mg
Following completion of 6-12 month treatment for DVT or PE	10 mg once daily	10 mg

The duration of therapy should be individualised after careful assessment of the treatment benefit against the risk for bleeding (see **WARNINGS AND PRECAUTIONS**). Short duration of therapy (at least 3 months) should be based on transient risk factors (e.g. recent surgery, trauma, immobilisation) and longer durations should be based on permanent risk factors or predisposing DVT or PE.
If a dose is missed during the 15 mg twice daily treatment phase (day 1-21), the patient should take Riban immediately to ensure intake of 30 mg Riban per day. In this case two 15 mg tablets may be taken at once. The patient should continue with the regular 15 mg twice daily intake as recommended on the following day.
If a dose is missed during the once daily treatment phase (day 22 and onwards), the patient should take Riban immediately, and continue on the following day with once daily intake as recommended. The dose should not be doubled within the same day to make up for a missed dose.
Converting from Vitamin K Antagonists (VKA) to Riban
For patients treated for reducing the risk of stroke and systemic embolism, VKA treatment should be stopped and Riban therapy should be initiated when the INR is ≤ 3.0.
For patients treated for DVT or PE, VKA treatment should be stopped and Riban therapy should be initiated once the INR is ≤ 2.5.

When converting patients from VKAs to Riban, INR values will be falsely elevated after the intake of Riban. The INR is not valid to measure the anticoagulant activity of Riban, and therefore should not be used (see **DRUG INTERACTIONS**).
Converting from Riban to Vitamin K Antagonists (VKA)
There is a potential for inadequate anticoagulation during the transition from Riban to VKA. Continued adequate anticoagulation should be ensured during any transition to an alternate anticoagulant. It should be noted that Riban can contribute to an elevated INR.
In patients converting from Riban to VKA, VKA should be given concurrently until the INR is ≥ 2.0. For the first two days of the conversion period, standard initial dosing of VKA should be followed by VKA dosing guided by INR testing. While patients are on both Riban and VKA the INR should not be tested earlier than 24 hours after the previous dose but prior to the next dose of Riban. Once Riban is discontinued INR testing may be done reliably at least 24 hours after the last dose (see **DRUG INTERACTION**).
Converting from Parenteral Anticoagulants to Riban
For patients currently receiving a parenteral anticoagulant, Riban should be started 0 to 2 hours before the time of the next scheduled administration of the parenteral medicinal product (e.g. LMWH) or at the time of discontinuation of a continuously administered parenteral medicinal product (e.g. intravenous unfractionated heparin).
Converting from Riban to Parenteral Anticoagulants
Give the first dose of parenteral anticoagulant at the time the next Riban dose would be taken.

Special Populations
Renal Impairment
Limited clinical data for patients with severe renal impairment (creatinine clearance 15-29 mL/min) indicate that Rivaroxaban plasma concentrations are significantly increased. Therefore, Riban is to be used with caution in these patients. Use is not recommended in patients with creatinine clearance < 15 mL/min (see **WARNING AND PRECAUTION**).
• For the prevention of venous thromboembolism (VTE) in adult patients undergoing elective hip or knee replacement surgery, when the recommended dose is 10 mg once daily, no dose adjustment is necessary in patients with mild renal impairment (creatinine clearance 30-49 mL/min).
• For reducing the risk of stroke and systemic embolism in patients with non-valvular atrial fibrillation, when the recommended dose is 20 mg once daily, no dose adjustment from the recommended dose is necessary in patients with mild renal impairment (creatinine clearance 30 - 49 mL/min). In patients with moderate (creatinine clearance 30 - 49 mL/min) or severe (creatinine clearance 15 - 29 mL/min) renal impairment, the recommended dose is 15 mg once daily.
• For the treatment of DVT or PE, when the recommended dose is 15 mg twice daily for the first 3 weeks followed by 20 mg once daily, no dose adjustment from the recommended dose is necessary in patients with mild renal impairment (creatinine clearance 30 - 49 mL/min). In patients with moderate (creatinine clearance 30 - 49 mL/min) or severe (creatinine clearance 15 - 29 mL/min) renal impairment, patients should be treated with 15 mg twice daily for the first 3 weeks. Thereafter, the recommended dose is 15 mg once daily based on PK modelling (see **WARNING AND PRECAUTION**). Following completion of 6 - 12 month treatment for DVT or PE, when dose reduction to 10 mg once daily is considered, no dose adjustment is necessary.
Hepatic Impairment
Riban is contraindicated in patients with hepatic disease associated with coagulopathy and clinically relevant bleeding risk including cirrhotic patients with Child Pugh B and C (see **CONTRAINDICATIONS**).
Elderly Population
No dose adjustment.
Body Weight
No dose adjustment.
Gender
No dose adjustment.
Pediatric Population
To the safety and efficacy of Riban in children aged 10 to 18 years have not been established. No data are available. Therefore, Riban is not recommended for use in children below 18 years of age.
Patients Undergoing Cardioversion
Riban can be initiated or continued in patients who may require cardioversion.
For transesophageal echocardiogram (TEE) guided cardioversion in patients not previously treated with anticoagulants, Riban treatment should be started at least 4 hours before cardioversion to ensure adequate anticoagulation.

Method of administration
For oral use.
Riban 10 mg can be taken with or without food.
Riban 15 & 20 mg are to be taken with food.

CONTRAINDICATIONS
• Hypersensitivity to the active substance or any of the excipients.
• Clinical significant active bleeding
• Lesion or condition at significant risk of major bleeding such as current or recent gastrointestinal ulceration, presence of malignant neoplasms at high risk of bleeding, recent brain or spinal injury, recent brain, spinal or ophthalmic surgery, recent intracranial haemorrhage, known or suspected oesophageal varices, arteriovenous malformations, vascular aneurysms or major intracranial or intracerebral vascular abnormalities.
• Concomitant treatment with any other anticoagulant agent e.g. unfractionated heparin (UFH), low molecular weight heparins (enoxaparin, etc.), heparin derivatives (fondaparinux, etc.), oral anticoagulants (warfarin, apixaban, dabigatran, etc.) except under the circumstances of switching therapy to or from Rivaroxaban (see **PHARMACOLOGY AND METHOD OF ADMINISTRATION**) or when UFH is given at doses necessary to maintain a patent central venous or arterial catheter.
• Hepatic disease associated with coagulopathy and clinically relevant bleeding risk including cirrhotic patients with Child Pugh B and C.
• Pregnancy and breastfeeding (see **FERTILITY, PREGNANCY AND LACTATION**).
• Clinical studies conducted using the innovator product Xarelto®.

SIDE EFFECTS
Frequency are defined as:
Common (≥ 1/100 to < 1/10)
Uncommon (≥ 1/1,000 to < 1/100)
Rare (≥ 1/10,000 to < 1/1,000)
Not known : cannot be estimated from the available data.
"Clinical studies conducted using the innovator product Xarelto®".

Common	Uncommon	Rare	Not Known
Blood and lymphatic system disorders			
Anaemia (incl. respective laboratory parameters)	Thrombocytopenia (incl. platelet count increased)*		
Immune system disorders			
	Allergic reaction, dermatitis allergic		
Nervous system disorders			
Dizziness, headache	Cerebral and intracranial haemorrhage, syncope		
Eye disorders			
Eye haemorrhage (incl. conjunctival haemorrhage)			
Cardiac disorders			
	Tachycardia		
Vascular disorders			
Hypotension, haematoma		Pseudoaneurysm formation following percutaneous intervention*	
Respiratory, thoracic and mediastinal disorders			
Epistaxis Haemoptysis			
Gastrointestinal disorders			
Gingiva bleeding, Gastrointestinal tract haemorrhage (incl. oesophageal haemorrhage), gastrointestinal and abdominal pains, dyspepsia, nausea, constipation*, diarrhoea, vomiting	Dry mouth		
Hepatobiliary disorders			
	Hepatic function abnormal	Jaundice	
Skin and subcutaneous tissue disorders			
Pruritis (incl. uncommon cases of generalised pruritis), rash, eczematous, cutaneous and subcutaneous haemorrhage	Urticaria		
Musculoskeletal and connective tissue disorders			
Pain in extremity*	Haemarthrosis	Muscle haemorrhage	Compartment syndrome secondary to a bleeding
Renal and urinary disorders			
Urogenital tract haemorrhage (incl. haematuria and menorrhagia), Renal impairment (incl. blood creatinine increased, blood urea increased)*			Renal failure/acute renal failure secondary to a bleeding sufficient to cause hyperperfusion
General disorders and administration site conditions			
Fatigue*, peripheral oedema, decreased general strength and energy (incl. fatigue and asthenia)	Feeling unwell (incl. malaise)	Localised oedema*	
Investigations			
Increase in transaminases	Increased bilirubin, increased blood alkaline phosphatase*, increased LDH*, increased lipase*, increased amylase*, increased GGT*	Bilirubin conjugated increased (with or without concomitant transaminase increase (ALT))	
Injury, poisoning and procedural complications			
Postprocedural haemorrhage (incl. postoperative anaemia, and wound haemorrhage), confusion Wound secretion*			

A: observed in prevention of venous thromboembolism (VTE) in adult patients undergoing elective hip or knee replacement surgery.
B: observed in treatment of DVT and PE in which duration of treatment should be based on the underlying disease as very common women ≥ 65 years.
*: These reactions occurred in other clinical studies than the phase III studies in patients undergoing major orthopaedic surgery of the lower limbs, patients treated for DVT, or patients treated for the reducing the risk of stroke and systemic embolism.

Description of Selected Adverse Reactions
Due to the pharmacological mode of action, the use of Riban may be associated with an increased risk of occult or overt bleeding from any tissue or organ which may result in post haemorrhagic anaemia. The signs, symptoms, and severity (including fatal outcomes) will vary according to the location and degree or extent of the bleeding and/or anaemia (see **OVERDOSE**). In the clinical studies mucosal bleedings (i.e. epistaxis, gingival, gastrointestinal, urogenital) and anaemia were seen more frequently during long term Rivaroxaban compared with VKA treatment. Thus, in addition to adequate clinical surveillance, laboratory testing of haemoglobin/haematocrit could be of value to detect occult bleeding, as judged to be appropriate. The risk of bleedings may be increased in certain patient groups (e.g. those patients with severe renal impairment or on concomitant treatment affecting haemostasis (see **Haemorrhagic Risk** in **WARNING AND PRECAUTION**). Menstrual bleeding may be intensified and/or prolonged. Haemorrhagic complications may present as weakness, paleness, dizziness, headache or unexplained swelling, dyspnoea, and unexplained shock. In some cases as a consequence of anaemia, symptoms of cardiac ischaemia like chest pain or angina pectoris have been observed.
In cases of spontaneous or traumatic bleeding such as compartment syndrome and renal failure due to hyperperfusion have been reported for Riban. Therefore, the possibility of haemorrhage is to be considered in hypoalbuminemia in any anticoagulated patient.
Post-Marketing Observations
The following adverse reactions have been reported post-marketing in temporal association with the use of Riban. The frequency of these adverse reactions reported from post-marketing experience cannot be estimated.
Immune system disorders: Angioedema and allergic oedema (In the pooled phase III trials, these events were uncommon ≥1/1,000 to <1/100).
Hepatobiliary disorders: Cholestasis, Hepatitis (incl. hepatocellular injury) (In the pooled phase III trials, these events were rare ≥1/10,000 to <1/1,000).
Blood and lymphatic system disorders: Thrombocytopenia (In the pooled phase III trials, these events were uncommon ≥1/1,000 to <1/100).
Skin and subcutaneous tissue disorders: Stevens-Johnson syndrome/Toxic Epidermal Necrolysis (In the pooled phase III trials, these events were estimated as very rare (<1/10,000)).
Respiratory, thoracic and mediastinal disorders: Eosinophilic pneumonia (In the pooled phase III trials, these events were very rare (<1/10,000)).
Renal and urinary disorders: Anticoagulant-related nephropathy (In the pooled phase III trials, the frequency cannot be estimated).
"Clinical studies conducted using the innovator product Xarelto®".

WARNINGS AND PRECAUTIONS
Clinical surveillance in line with anticoagulation practice is recommended throughout the treatment period.
Premature Discontinuation of Riban
Premature discontinuation of any oral anticoagulant, including Riban, in the absence of adequate alternative anticoagulation increases the risk of thrombotic events. If Riban is discontinued for a reason other than pathological bleeding or completion of a course of therapy, consider coverage with another anticoagulant (see **PHARMACOLOGY AND METHOD OF ADMINISTRATION**).
Haemorrhagic Risk
As with other anticoagulants, patients taking Riban are to be carefully observed for signs of bleeding. It is recommended that Riban should be used with caution in patients with increased risk of haemorrhage. Riban administration should be discontinued if severe haemorrhage occurs.
The increased studies of bleeding events (i.e. epistaxis, gingival, gastrointestinal, genito urinary) and anaemia were seen more frequently during long term Rivaroxaban treatment compared with VKA treatment. Thus, in addition to adequate clinical surveillance, laboratory testing of haemoglobin/haematocrit could be of value to detect occult bleeding, as judged to be appropriate.
Several sub-groups of patients, as detailed below, are at increased risk of bleeding. These patients are to be carefully monitored for signs and symptoms of bleeding complications and anaemia after initiation of treatment (see **SIDE EFFECT**). This may be done by regular physical examination of the patients, close observation of the surgical wound drainage and periodic measurement of haemoglobin.
Any unexplained fall in haemoglobin or blood pressure should lead to a search for a bleeding site.
Although treatment with Rivaroxaban does not require routine monitoring of exposure, Rivaroxaban levels measured with a calibrated quantitative anti-Factor Xa assay may be useful in exceptional situations where knowledge of Rivaroxaban exposure may help to inform clinical decisions, e.g. overdose and emergency surgery.
"Clinical studies conducted using the innovator product Xarelto®".

Renal Impairment
In patients with severe renal impairment (creatinine clearance < 30 mL/min), Rivaroxaban plasma levels may be significantly increased (1.6 fold on average) which may lead to an increased bleeding risk. Riban is to be used with caution in patients with creatinine clearance of 15-29 mL/min. Use is not recommended in patients with creatinine clearance < 15 mL/min (see **PHARMACOLOGY AND METHOD OF ADMINISTRATION**).
The Azole anti-mycotic fluconazole, a moderate CYP3A4 inhibitor, has however less effect on Rivaroxaban exposure and can be co-administered (see **DRUG INTERACTIONS**).
Riban is to be used with caution in patients with moderate renal impairment (creatinine clearance <50-30 mL/min) concomitantly receiving other medicinal products which increase Riban plasma concentrations (see **DRUG INTERACTIONS**).
Riban should be used with caution in patients with renal impairment concomitantly receiving other medicinal products that are potent inhibitors of Factor Xa (e.g. dabigatran, bivalirudin, etc.) as PK modelling shows increased Rivaroxaban concentrations in these patients.
Hepatic Impairment
In cirrhotic patients with moderate hepatic impairment (classified as Child-Pugh B), Riban plasma levels may be significantly increased which may lead to an increased bleeding risk. Riban is contraindicated in patients with hepatic disease associated with coagulopathy and clinically relevant bleeding risk. Riban may be used with caution in cirrhotic patients with moderate hepatic impairment (Child-Pugh B) if it is not associated with coagulopathy (see **PHARMACOLOGY AND METHOD OF ADMINISTRATION, CONTRAINDICATION**). "Clinical studies conducted using the innovator product Xarelto®".

Interaction with other Medicinal Products
The use of Riban is not recommended in patients receiving concomitant systemic treatment with azole-antimycotics (such as ketoconazole, itraconazole, voriconazole and posaconazole) or HIV protease inhibitors (e.g. ritonavir). These azole substances are strong inhibitors of both CYP3A4 and P-gp and therefore may increase Rivaroxaban plasma concentrations to a clinically relevant degree (2.6 fold on average) which may lead to an increased bleeding risk (see **DRUG INTERACTION**).
Fluconazole is expected to have less effect on Rivaroxaban exposure and can be co-administered with caution. Care is to be taken if patients are treated concomitantly with medicinal products affecting haemostasis such as non-steroidal anti-inflammatories (NSAIDs), acetylsalicylic acid and platelet aggregation inhibitors, or selective serotonin reuptake inhibitors (SSRI) and serotonin norepinephrine reuptake inhibitors (SNRIs) (see **DRUG INTERACTION**). For patients at risk of ulcerative gastrointestinal disease an appropriate prophylactic treatment may be considered (see **DRUG INTERACTION**). "Clinical studies conducted using the innovator product Xarelto®".
Other Haemorrhagic Risk Factors
As with other antithrombotics, Rivaroxaban is not recommended in patients with an increased bleeding risk such as:
• Congenital or acquired bleeding disorders
• Uncontrolled severe arterial hypertension
• Active ulcerative gastrointestinal disease
• Recent gastrointestinal ulcerations
• Vascular retinopathy
• Recent intracranial or intracerebral haemorrhage
• Intracranial or intracerebral vascular abnormalities
• Recent brain, spinal or ophthalmological surgery
• Bronchiectasis or history of pulmonary haemoptysis
Bleeding during antithrombotic treatment may unmask underlying yet unknown malignancy, in particular in the gastrointestinal and genitourinary tract. Patients with malignant disease may simultaneously be at higher risk of bleeding and thrombosis. The individual benefit of antithrombotic treatment should be weighed against risk for bleeding in patients with active cancer dependent on tumor location, antineoplastic therapy and stage of disease, or patients at risk of ulcerative gastrointestinal disease an appropriate prophylactic treatment may be considered. There is no need for monitoring of coagulation parameters during treatment with Rivaroxaban in clinical routine. However, the clinical benefit of the treatment should be monitored by calibrated quantitative anti-Factor Xa tests "Clinical studies conducted using the innovator product Xarelto®".

Patients with Prosthetic Valves
Riban is not recommended for thromboprophylaxis in patients having recently undergone transcatheter aortic valve replacement (TAVR) based on data from a randomized controlled clinical study comparing a Rivaroxaban-regimen an antiplatelet regimen in patients with aortic valve replacement.
The safety and efficacy of Riban have not been studied in patients with other prosthetic heart valves or other valve procedures. Therefore, there are no data to support that Riban provides adequate anticoagulation in those patient populations. "Clinical studies conducted using the innovator product Xarelto®".
Patients with Antiphospholipid Syndrome
Direct acting Oral Anticoagulants (DOACs) including Rivaroxaban are not recommended for patients with a history of thrombosis who are diagnosed with antiphospholipid syndrome. In particular for patients that are triple positive (for lupus anticoagulant, anticardiolipin antibodies, and anti-beta 2-glycoprotein I antibodies), treatment with DOACs should be associated with increased rates of recurrent thrombotic events compared with Rivaroxaban in clinical therapy. Hip Fracture Surgery
Riban (see not recommended in interventional clinical trials in patients undergoing hip fracture surgery to evaluate efficacy and safety. "Clinical studies conducted using the innovator product Xarelto®".

Spinal/Epidural Anesthesia or Puncture
When neuraxial anesthesia (spinal/epidural anesthesia) or spinal/epidural puncture is employed, patients treated with antithrombotic agents for prevention of thromboembolic complications are at risk of developing an epidural or spinal hematoma with potential for long-term or permanent paralysis. The risk of these events may be increased by the postoperative use of indwelling epidural catheters or the concomitant use of medicinal products affecting haemostasis. The risk may also be increased by traumatic or repeated epidural or spinal puncture. Patients are to be regularly monitored for signs and symptoms of weakness of the legs, bowel or bladder dysfunction). If neurological compromise is noted, urgent diagnosis and treatment are necessary. Patients with a history of bleeding disorders or patients who require thrombolysis or pulmonary embolism.
Riban is not recommended as an alternative to unfractionated heparin in patients with pulmonary embolism who are haemodynamically unstable or may receive thrombolysis or pulmonary embolism since the safety and efficacy of Riban have not been studied in these clinical situations. "Clinical studies conducted using the innovator product Xarelto®".
Resection Recommendations Before and After Invasive Procedures and Surgical Intervention
If an invasive procedure or surgical intervention is required, Riban should be stopped at least 24 hours before the intervention, if possible and based on the clinical judgement of the physician.
If the procedure cannot be delayed the increased risk of bleeding should be assessed against the urgency of the intervention.
If the procedure is restarted as soon as possible after the invasive procedure or surgical intervention as soon as possible provided the clinical situation allows and adequate haemostasis has been established.
Spinal/Epidural Anesthesia or Puncture
When neuraxial anesthesia (spinal/epidural anesthesia) or spinal/epidural puncture is employed, patients treated with antithrombotic agents for prevention of thromboembolic complications are at risk of developing an epidural or spinal hematoma with potential for long-term or permanent paralysis. The risk of these events may be increased by the postoperative use of indwelling epidural catheters or the concomitant use of medicinal products affecting haemostasis. The risk may also be increased by traumatic or repeated epidural or spinal puncture. Patients are to be regularly monitored for signs and symptoms of weakness of the legs, bowel or bladder dysfunction). If neurological compromise is noted, urgent diagnosis and treatment are necessary. Patients with a history of bleeding disorders or patients who require thrombolysis or pulmonary embolism.
Riban is not recommended as an alternative to unfractionated heparin in patients with pulmonary embolism who are haemodynamically unstable or may receive thrombolysis or pulmonary embolism since the safety and efficacy of Riban have not been studied in these clinical situations. "Clinical studies conducted using the innovator product Xarelto®".

Interaction with CYP3A4 Inducers
The concomitant use of Riban with strong CYP3A4 inducers (e.g. rifampin, phenytoin, carbamazepine, Phenytoin or St. John's Wort) may lead to reduced Riban plasma concentrations. Strong CYP3A4 inducers should be discontinued at least 4 weeks before the start of Riban treatment (see **WARNING AND PRECAUTIONS**).
Elderly Population
No dose adjustment.
Body Weight
No dose adjustment.
Gender
No dose adjustment.
Pediatric Population
To the safety and efficacy of Riban in children aged 10 to 18 years have not been established. No data are available. Therefore, Riban is not recommended for use in children below 18 years of age.
Patients Undergoing Cardioversion
Riban can be initiated or continued in patients who may require cardioversion.
For transesophageal echocardiogram (TEE) guided cardioversion in patients not previously treated with anticoagulants, Riban treatment should be started at least 4 hours before cardioversion to ensure adequate anticoagulation.

FERTILITY, PREGNANCY, AND LACTATION
Pregnancy
Safety and efficacy of Riban have not been established in pregnant women. Studies in animals have shown reproductive toxicity. Due to the potential reproductive toxicity, the intrinsic risk of bleeding and the evidence that Rivaroxaban passes the placenta, Riban is contraindicated during pregnancy (see **CONTRAINDICATIONS**). Women of child-bearing potential should avoid becoming pregnant during treatment with Rivaroxaban. "Clinical studies conducted using the innovator product Xarelto®".
Lactation
Safety and efficacy of Riban have not been established in breast feeding women. Data from animals indicate that Rivaroxaban is secreted into milk. Therefore Rivaroxaban is contraindicated during breast feeding (see **CONTRAINDICATIONS**). A decision must be made whether to discontinue breastfeeding or to discontinue/abandon therapy. "Clinical studies conducted using the innovator product Xarelto®".
Fertility
No specific studies with Rivaroxaban in humans have been conducted to evaluate effects on fertility. In a study in male and female fertility in rats no effects were seen "Clinical studies conducted using the innovator product Xarelto®".

OVERDOSE
Rare cases of overdose up to 600 mg have been reported without bleeding complications or other adverse reactions. Due to limited absorption a ceiling effect with no further increase in average plasma exposure is expected at supratherapeutic doses of 50 mg Rivaroxaban or above.
No specific antidote antagonising the pharmacodynamic effect of Rivaroxaban is not available.
The use of activated charcoal to reduce absorption in case of Rivaroxaban overdose may be considered.
Management of bleeding
Should a bleeding complication arise in a patient receiving Rivaroxaban, the next Rivaroxaban administration should be delayed or treatment should be discontinued as appropriate.
Rivaroxaban has a half-life of approximately 5 to 13 hours. Management should be individualised according to the severity and location of the haemorrhage. Appropriate symptomatic treatment could be used as needed, such as mechanical compression (e.g. for superficial epistaxis), surgical haemostatic with bleeding control procedures, fluid replacement and haemodynamic support, blood products (packed red cells or fresh frozen plasma, depending on associated anaemia or coagulopathy) or platelets.
If bleed cannot be controlled by the above measures, administration of a specific procoagulant reversal agent should be considered, such as prothrombin complex concentrate (PCC), activated prothrombin complex concentrate (APCC) or Factor Xa inhibitor (idarucicab) (substance of CYP3A4). However, there is currently very limited clinical experience with the use of these products in individuals receiving Rivaroxaban. The recommendation is also based on limited non-clinical data. Re-dosing of recombinant factor VIII should be considered and stratified depending on improvement of bleeding. Prothrombin complex concentrate (PCC) should be used to reverse the anticoagulant activity of Rivaroxaban. There is limited experience with tranexamic acid, and no experience with aminocaproic acid and aprotinin in individuals receiving Rivaroxaban. There is no clinical data on the potential for benefit or no experience with the use of systemic haemostatic desmopressin in individuals receiving Rivaroxaban. Due to the high plasma protein binding Rivaroxaban is not expected to be dialysable. "Clinical studies conducted using the innovator product Xarelto®".

DRUG INTERACTIONS
CYP3A4 and P-gp inhibitors
Co-administration of Rivaroxaban with ketoconazole (400 mg once a day) or ritonavir (600 mg twice a day) led to a 2.6 fold / 2.5 fold increase in mean Rivaroxaban AUC and a 1.7 fold / 1.6 fold increase in mean Rivaroxaban C_{max}, with significant increases in pharmacodynamic effects which may lead to an increased bleeding risk. Therefore, the use of Rivaroxaban is not recommended in patients receiving concomitant systemic treatment with azole-antimycotics such as ketoconazole, itraconazole, voriconazole and posaconazole, or HIV protease inhibitors. These active substances are strong inhibitors of both CYP3A4 and P-gp (see **WARNINGS AND PRECAUTIONS**). Active substances strongly inhibiting only one of the Rivaroxaban elimination pathways, either CYP3A4 or P-gp, are expected to increase Rivaroxaban plasma concentrations to a lesser extent. Clarithromycin (600 mg twice a day), for instance, considered a strong CYP3A4 inhibitor and moderate P-gp inhibitor, led to a 1.5-fold increase in mean Rivaroxaban AUC and C_{max} 1.4-fold increase in C_{max}. The interaction with clarithromycin is likely not clinically relevant in most patients but can be potentially significant in high-risk patients.
Erythromycin (500 mg three times a day), which inhibits CYP3A4 and P-gp moderately, led to a 1.3-fold increase in mean Rivaroxaban AUC and C_{max}. This increase is not considered clinically relevant. The interaction with erythromycin is likely not clinically relevant in most patients but can be potentially significant in high-risk patients.
Itraconazole (400 mg once daily), considered a moderate CYP3A4 inhibitor, led to a 1.4-fold increase in mean Rivaroxaban AUC and a 1.3-fold increase in mean C_{max}. The interaction with fluconazole is likely not clinically relevant in most patients but can be potentially significant in high-risk patients.
Given the limited clinical data available with dronedarone, co-administration with Rivaroxaban should be avoided. "Clinical studies conducted using the innovator product Xarelto®".
Anticoagulants
After combined administration of enoxaparin (40 mg single dose) with Rivaroxaban (10 mg single dose) an additive effect on anti-Factor Xa activity was observed without any additional effects on clotting tests (PT, aPTT). Enoxaparin did not affect the pharmacokinetics of Rivaroxaban. Due to the increased bleeding risk care is to be taken if patients are treated concomitantly with any other anticoagulants (see **WARNINGS AND PRECAUTIONS**).
NSAIDs/Platelet Aggregation Inhibitors
No clinically relevant prolongation of bleeding time was observed after concomitant administration of Rivaroxaban (15 mg) and 600 mg naproxen. Nevertheless, there may be individuals with a more pronounced pharmacodynamic response. No clinically significant pharmacokinetic or pharmacodynamic interactions were observed when Rivaroxaban was coadministered with 500 mg acetylsalicylic acid.
Clopidogrel (200 mg loading dose followed by 75 mg maintenance dose) did not show a pharmacokinetic interaction with Rivaroxaban (15 mg) but a relevant increase in bleeding time was observed in a subset of patients which was not correlated to platelet aggregation, P-selectin or GPIIb/IIIa receptor levels.
Care is to be taken if patients are treated concomitantly with NSAIDs (including acetylsalicylic acid) and platelet aggregation inhibitors because these medicinal products typically increase the bleeding risk (see **WARNINGS AND PRECAUTIONS**). "Clinical studies conducted using the innovator product Xarelto®".

SSRIs/SNRIs
As with other anticoagulants, the possibility may exist that patients are at increased risk of bleeding in case of concomitant use with SSRIs or SNRIs due to their reported effect on platelets. When concomitantly used in the Rivaroxaban clinical programme, patients with higher rates of major or non-major clinically relevant bleeding were observed in all treatment groups. "Clinical studies conducted using the innovator product Xarelto®".
Warfarin
Converting patients from the vitamin K antagonist warfarin (INR 2.0 to 3.0) to Rivaroxaban (20 mg) or from Rivaroxaban (20 mg) to warfarin (INR 2.0 to 3.0) increased prothrombin time/INR (Neoplasin) more than additively (individual INR values up to 12 may be observed), whereas effects on aPTT, inhibition of factor Xa activity and endogenous thrombin potential were additive. If it is desired to test the pharmacodynamic effects of Rivaroxaban during the conversion period, anti-factor Xa activity, PCT, and HepTest can be used as these tests were not affected by warfarin. On the fourth day after the last dose of warfarin,

