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**Real-World Study Further Confirms Safety Profile of XARELTO®
in Nearly 45,000 People with Non-Valvular Atrial Fibrillation (NVAF),
Including Those with Concomitant Diabetes**

Study definitively confirms original results of ROCKET AF and adds to growing body of real-world evidence, informing the safety of XARELTO® in high-risk patients with NVAF

Chicago, IL (April 2, 2016) — New data from an ongoing post-marketing study in nearly 45,000 people with non-valvular atrial fibrillation (NVAF) confirm the safety profile of XARELTO® (rivaroxaban) was generally consistent with the findings observed in ROCKET AF, the Phase 3 study that supported the approval of the medicine for prevention of stroke in patients with NVAF. The [real-world findings](#), which also confirm the rates and patterns of major bleeding in 12,039 patients with NVAF and concomitant diabetes, were presented today at the American College of Cardiology's 65th Annual Scientific Session (ACC.16).

"We have closely examined the use of rivaroxaban in daily clinical practice for the last three years, and our findings continue to provide important insights about the safety of rivaroxaban, with a safety profile generally consistent with what was observed in clinical trials," said study investigator W. Frank Peacock, MD, FACEP, Associate Chair and Research Director, Emergency Medicine, Baylor College of Medicine, Houston, TX. "As part of our ongoing observational study, which now includes nearly 45,000 people with NVAF, we also examine the safety of rivaroxaban in those patients with concomitant chronic conditions. Approximately 34 percent of people with NVAF also have diabetes, and our research presented today also confirms the safety profile of rivaroxaban in this high-risk group."

The study, called PMSS (Post-Marketing Safety Surveillance), is Janssen's ongoing five-year observational study that evaluates major bleeding in people with NVAF in the U.S. taking once-daily XARELTO[®]. As observed with previous data cuts, the 2.5-year data presented today found the rates and patterns of major bleeding were generally consistent with [ROCKET AF](#). Of the 32,754 people taking XARELTO[®] in PMSS without diabetes, the incidence of major bleeding was observed at 2.51 per 100 person-years¹, with the most common bleeding site being gastrointestinal. Fatal bleeds were uncommon, with an incidence of 0.09 per 100 person-years. In a [sub-analysis of ROCKET AF](#), the incidence of major bleeding for XARELTO[®] in patients with NVAF without diabetes was observed at 3.47 per 100 person-years.

PMSS researchers also examined major bleeding rates of XARELTO[®] in patients with NVAF with diabetes, and found the incidence rate to be generally consistent with the [ROCKET AF](#) sub-analysis. In PMSS, 12,039 people, or nearly 27 percent, also had diabetes, and the incidence of major bleeding was observed at 3.68 per 100 person-years, with the most common bleeding site being gastrointestinal. Fatal bleeds were uncommon, with an incidence of 0.09 per 100 person-years. In [ROCKET AF](#), 2,878 people taking XARELTO[®], or 40 percent, also had diabetes. The [ROCKET AF](#) sub-analysis found the incidence of major bleeding to be 3.79 per 100 person-years.

¹ Incidence rate was calculated using a person-time approach: the total number of people experiencing major bleeding divided by the number of years of all people receiving XARELTO[®] (expressed in 100-year increments).

"It's very important we track the safety of XARELTO® across the complete spectrum of people with NVAF, as they often have other concomitant chronic conditions that increase their risk of stroke," said Paul Burton, MD, PhD, Vice President, Medical Affairs, Janssen. "We are pleased that study after study confirms the real-world safety profile of XARELTO® in patients with NVAF who take the medicine to reduce the risk of stroke, including in high-risk patients like those with diabetes, renal impairment and advanced age."

Research in High-Risk Populations

Nearly six million Americans have atrial fibrillation, and concomitant chronic conditions in people with NVAF can increase their risk of stroke exponentially.² Based on data of Medicare beneficiaries, an estimated 34 percent of people with NVAF also have diabetes; other data found 84 percent have hypertension, 74 percent are at advanced age (75 years or older), 36 percent have heart failure and 30 percent have cerebrovascular disease.³ Current clinical practice guidelines recommend people with NVAF and a CHA₂DS₂-VASc score of greater than or equal to 2, including those with comorbidities like diabetes, be considered for anticoagulation therapy to reduce their risk of stroke.⁴

Adhering to dietary guidelines is important for people with diabetes. Warfarin, an older anticoagulant often prescribed to patients with NVAF, carries dietary restrictions, making treatment challenging for people living with both conditions. XARELTO®, given once daily with the evening meal with no dietary restrictions or blood monitoring required, could be a proven treatment option for patients with NVAF and diabetes.

In addition to patients with NVAF and diabetes, PMSS researchers have presented findings examining the safety of XARELTO® in patients with NVAF and [renal disease](#) and in those with [advanced age](#), showing the rates and patterns of major bleeding in these high-risk groups were generally consistent with clinical trials.

² Colilla S et al. Estimates of Current and Future Incidence and Prevalence of Atrial Fibrillation in the U.S. Adult Population. *Am J Cardiol* 2013;112(8):1142-1147.

³ Piccini JP et al. Incidence and Prevalence of Atrial Fibrillation and Associated Mortality Among Medicare Beneficiaries, 1993-2007. *Circ Cardiovasc Qual Outcomes* 2012;5(1):85-93.

⁴ January CT et al. 2014 AHA/ACC/HRS Guideline for the Management of Patients with Atrial Fibrillation. *J Am Coll Cardiol* 2014;64(21):e1-e76.

About PMSS and Other Real-World Research

More than 91,000 patients have been enrolled to date in real-world studies for XARELTO[®], including ongoing retrospective studies like PMSS and prospective studies like XANTUS. Real-world research is an integral part of EXPLORER, the overall clinical development program for XARELTO[®]. A collaborative research effort with Bayer, EXPLORER evaluates the potential role of XARELTO[®] in addressing additional critical medical needs and generates important clinical evidence on the performance of the medicine in routine clinical practice. EXPLORER includes six additional indication-seeking trials beyond the currently approved six indications in the U.S. By the time of its completion, more than 275,000 patients will have participated in the XARELTO[®] EXPLORER clinical development program.

The PMSS study was designed by Janssen in conjunction with the U.S. Department of Defense (DoD) and Health ResearchTx LLC (HRTX), and in agreement with the U.S. Food and Drug Administration (FDA) as part of a post-marketing requirement, to analyze and report major bleeding events, associated risk factors and bleeding-related clinical outcomes in patients with NVAF taking XARELTO[®]. All doses of XARELTO[®] (10 mg, 15 mg and 20 mg) are examined in PMSS.

For the study presented at ACC.16, researchers analyzed data from January 1, 2013, to June 30, 2015, using HRTX/DoD integrated electronic healthcare records. Major bleeding cases were ascertained using a validated Cunningham (2011) algorithm, which was generally consistent with, but not identical to, the definition of major bleeding used in clinical studies, because it relied on retrospectively identified electronic medical records.

Of note, PMSS is a retrospective study with no comparator arm. Methodological differences limit the interpretation of the comparison to clinical trials.

About XARELTO[®] (rivaroxaban)

XARELTO[®] works by blocking the blood clotting Factor Xa. XARELTO[®] does not require routine blood monitoring. XARELTO[®] has a broad indication profile and is approved for six indications that include:

1. To reduce the risk of strokes and blood clots in patients with atrial fibrillation not caused by a heart valve problem. For patients currently well managed on warfarin, there is limited information on how XARELTO[®] and warfarin compare in reducing the risk of stroke.

2. To treat patients with deep vein thrombosis (DVT).
3. To treat patients with pulmonary embolism (PE).
4. To reduce the risk of recurrence of DVT or PE following an initial six-month treatment for acute venous thromboembolism.
5. To reduce the risk of blood clots in the legs and lungs of patients who have just had knee replacement surgery.
6. To reduce the risk of blood clots in the legs and lungs of patients who have just had hip replacement surgery.

IMPORTANT SAFETY INFORMATION:

WHAT IS THE MOST IMPORTANT INFORMATION I SHOULD KNOW ABOUT XARELTO®?

- **For people taking XARELTO® for atrial fibrillation:**

People with atrial fibrillation (an irregular heart beat) are at an increased risk of forming a blood clot in the heart, which can travel to the brain, causing a stroke, or to other parts of the body. XARELTO® lowers your chance of having a stroke by helping to prevent clots from forming. If you stop taking XARELTO®, you may have increased risk of forming a clot in your blood.

Do not stop taking XARELTO® without talking to the doctor who prescribes it for you. Stopping XARELTO® increases your risk of having a stroke.

If you have to stop taking XARELTO®, your doctor may prescribe another blood thinner medicine to prevent a blood clot from forming.

- **XARELTO® can cause bleeding**, which can be serious, and rarely may lead to death. This is because XARELTO® is a blood thinner medicine that reduces blood clotting. While you take XARELTO® you are likely to bruise more easily and it may take longer for bleeding to stop.

You may have a higher risk of bleeding if you take XARELTO® and take other medicines that increase your risk of bleeding, including:

- Aspirin or aspirin-containing products
- Non-steroidal anti-inflammatory drugs (NSAIDs)
- Warfarin sodium (Coumadin®, Jantoven®)
- Any medicine that contains heparin
- Clopidogrel (Plavix®)
- Other medicines to prevent or treat blood clots

Tell your doctor if you take any of these medicines. Ask your doctor or pharmacist if you are not sure if your medicine is one listed above.

Call your doctor or get medical help right away if you develop any of these signs or symptoms of bleeding:

- Unexpected bleeding or bleeding that lasts a long time, such as:
 - Nosebleeds that happen often
 - Unusual bleeding from gums

- Menstrual bleeding that is heavier than normal, or vaginal bleeding
- Bleeding that is severe or that you cannot control
- Red, pink, or brown urine
- Bright red or black stools (looks like tar)
- Cough up blood or blood clots
- Vomit blood or your vomit looks like “coffee grounds”
- Headaches, feeling dizzy or weak
- Pain, swelling, or new drainage at wound sites

Spinal or epidural blood clots (hematoma): People who take a blood thinner medicine (anticoagulant) like XARELTO[®], and have medicine injected into their spinal and epidural area, or have a spinal puncture, have a risk of forming a blood clot that can cause long-term or permanent loss of the ability to move (paralysis). Your risk of developing a spinal or epidural blood clot is higher if:

- A thin tube called an epidural catheter is placed in your back to give you certain medicine
- You take NSAIDs or a medicine to prevent blood from clotting
- You have a history of difficult or repeated epidural or spinal punctures
- You have a history of problems with your spine or have had surgery on your spine

If you take XARELTO[®] and receive spinal anesthesia or have a spinal puncture, your doctor should watch you closely for symptoms of spinal or epidural blood clots. Tell your doctor right away if you have back pain, tingling, numbness, muscle weakness (especially in your legs and feet), or loss of control of the bowels or bladder (incontinence).

XARELTO[®] is not for patients with artificial heart valves.

WHO SHOULD NOT TAKE XARELTO[®]?

Do not take XARELTO[®] if you:

- Currently have certain types of abnormal bleeding. Talk to your doctor before taking XARELTO[®] if you currently have unusual bleeding.
- Are allergic to rivaroxaban or any of the ingredients of XARELTO[®].

WHAT SHOULD I TELL MY DOCTOR BEFORE OR WHILE TAKING XARELTO[®]?

Before taking XARELTO[®], tell your doctor if you:

- Have ever had bleeding problems
- Have liver or kidney problems
- Have any other medical condition
- Are pregnant or plan to become pregnant. It is not known if XARELTO[®] will harm your unborn baby. Tell your doctor right away if you become pregnant while taking XARELTO[®]. If you take XARELTO[®] during pregnancy, tell your doctor right away if you have bleeding or symptoms of blood loss.

- Are breastfeeding or plan to breastfeed. It is not known if XARELTO[®] passes into your breast milk. You and your doctor should decide if you will take XARELTO[®] or breastfeed.

Tell all of your doctors and dentists that you are taking XARELTO[®]. They should talk to the doctor who prescribed XARELTO[®] for you before you have any surgery, medical or dental procedure.

Tell your doctor about all the medicines you take, including prescription and nonprescription medicines, vitamins, and herbal supplements. Some of your other medicines may affect the way XARELTO[®] works. Certain medicines may increase your risk of bleeding. **See “What is the most important information I should know about XARELTO[®]?”**

Especially tell your doctor if you take:

- Ketoconazole (Nizoral[®])
- Itraconazole (Onmel[™], Sporanox[®])
- Ritonavir (Norvir[®])
- Lopinavir/ritonavir (Kaletra[®])
- Indinavir (Crixivan[®])
- Carbamazepine (Carbatrol[®], Equetro[®], Tegretol[®], Tegretol[®]-XR, Teril[™], Epitol[®])
- Phenytoin (Dilantin-125[®], Dilantin[®])
- Phenobarbital (Solfoton[™])
- Rifampin (Rifater[®], Rifamate[®], Rimactane[®], Rifadin[®])
- St. John’s wort (*Hypericum perforatum*)

Ask your doctor if you are not sure if your medicine is one listed above. Know the medicines you take. Keep a list of them to show your doctor and pharmacist when you get a new medicine.

HOW SHOULD I TAKE XARELTO[®]?

Take XARELTO[®] exactly as prescribed by your doctor.

Do not change your dose or stop taking XARELTO[®] unless your doctor tells you to.

- Your doctor will tell you how much XARELTO[®] to take and when to take it.
- Your doctor may change your dose if needed.

If you take XARELTO[®] for:

- **Atrial Fibrillation:** Take XARELTO[®] 1 time a day with your evening meal. If you miss a dose of XARELTO[®], take it as soon as you remember on the same day. Take your next dose at your regularly scheduled time.
- **Blood clots in the veins of your legs or lungs:**
 - Take XARELTO[®] once or twice a day as prescribed by your doctor.
 - Take XARELTO[®] with food at the same time each day.
 - If you miss a dose of XARELTO[®]:
 - **and take XARELTO[®] 2 times a day:** Take XARELTO[®] as soon as you remember on the same day. You may take 2 doses at the same time to make up for the missed dose. Take your next dose at your regularly scheduled time.
 - **and take XARELTO[®] 1 time a day:** Take XARELTO[®] as soon as you remember on the same day. Take your next dose at your regularly scheduled time.

- **Hip or knee replacement surgery:** Take XARELTO[®] 1 time a day with or without food. If you miss a dose of XARELTO[®], take it as soon as you remember on the same day. Take your next dose at your regularly scheduled time.
- If you have difficulty swallowing the tablet whole, talk to your doctor about other ways to take XARELTO[®].
- Your doctor will decide how long you should take XARELTO[®]. Do not stop taking XARELTO[®] without talking to your doctor first.
- Your doctor may stop XARELTO[®] for a short time before any surgery, medical or dental procedure. Your doctor will tell you when to start taking XARELTO[®] again after your surgery or procedure.
- Do not run out of XARELTO[®]. Refill your prescription for XARELTO[®] before you run out. When leaving the hospital following a hip or knee replacement, be sure that you have XARELTO[®] available to avoid missing any doses.
- If you take too much XARELTO[®], go to the nearest hospital emergency room or call your doctor right away.

WHAT ARE THE POSSIBLE SIDE EFFECTS OF XARELTO[®]?

Please see "What is the most important information I should know about XARELTO[®]?" above.

Tell your doctor if you have any side effect that bothers you or that does not go away.

Call your doctor for medical advice about side effects. You are also encouraged to report side effects to the FDA: visit <http://www.fda.gov/medwatch> or call 1-800-FDA-1088. You may also report side effects to Janssen Pharmaceuticals, Inc., at 1-800-JANSSEN (1-800-526-7736).

Please click [here](#) for full Prescribing Information, including Boxed Warnings, and Medication Guide.

Janssen and Bayer together are developing rivaroxaban.

For more information about XARELTO[®], visit www.xarelto.com.

About Janssen

At Janssen, we are dedicated to addressing and solving some of the most important unmet medical needs of our time in oncology, immunology, neuroscience, infectious diseases and vaccines, and cardiovascular and metabolic diseases. Driven by our commitment to patients, we develop innovative products, services and healthcare solutions to help people throughout the world. Janssen Pharmaceuticals, Inc. is one of the Janssen Pharmaceutical Companies of Johnson & Johnson. For more information, please visit www.janssen.com or follow us on Twitter at [@JanssenUS](https://twitter.com/JanssenUS).

Cautions Concerning Forward-Looking Statements

This press release contains "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995 regarding product development. The reader is cautioned not to rely on these forward-looking statements. These statements are based on current expectations of future events. If underlying assumptions prove inaccurate or known or unknown risks or uncertainties materialize, actual results could vary materially from the expectations and projections of Janssen Pharmaceuticals, Inc. and/or Johnson & Johnson. Risks and uncertainties include, but are not limited to: challenges and uncertainties inherent in new product development, including the uncertainty of clinical success and of obtaining regulatory approvals; competition, including technological advances, new products and patents attained by competitors; challenges to patents; changes to applicable laws and regulations, including global health care reforms; and trends toward health care cost containment. A further list and description of these risks, uncertainties and other factors can be found in Johnson & Johnson's Annual Report on Form 10-K for the fiscal year ended January 3, 2016, including in Exhibit 99 thereto, and the company's subsequent filings with the Securities and Exchange Commission. Copies of these filings are available online at www.sec.gov, www.jnj.com or on request from Johnson & Johnson. None of the Janssen Pharmaceutical Companies or Johnson & Johnson undertakes to update any forward-looking statement as a result of new information or future events or developments.

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