

Clinical Training Program

Localization Guidance for NEXPLANON[®] (etonogestrel implant) 68 mg Radiopaque

**Before localizing the implant, please read the full
Prescribing Information for NEXPLANON.**

LOCALIZATION OF NON-PALPABLE IMPLANT

Before initiating the removal procedure, the healthcare professional should assess the location of the implant and carefully read the instructions for removal. The exact location of the implant in the arm should be verified by palpation. If the implant is not palpable, consult the medical record to verify the arm which contains the implant. If the implant cannot be palpated, it may be deeply located or have migrated. Consider that it may lie close to vessels and nerves. Removal of non-palpable implants should only be performed by a healthcare professional experienced in removing deeply placed implants and familiar with localizing the implant and the anatomy of the arm. Call 1-844-674-3200 for further information.

A non-palpable implant should always be located prior to attempting removal. There have been reports of migration of the implant; usually this involves minor movement relative to the original position, but may lead to the implant not being palpable at the location in which it was placed. An implant that has been deeply inserted or has migrated may not be palpable and therefore imaging procedures may be required for localization. Suitable methods for localization of NEXPLANON® (etonogestrel implant) 68 mg Radiopaque include: two-dimensional X-ray, X-ray computerized tomography, ultrasound scanning with a high-frequency linear array transducer (10 MHz or greater) or magnetic resonance imaging. If these imaging methods fail to locate the implant, etonogestrel blood level determination can be used for verification of the presence of the implant. For details on etonogestrel blood level determination, call 1-844-674-3200 for further instructions.

If the implant cannot be found in the arm after comprehensive localization attempts, consider applying imaging techniques to the chest as events of migration to the pulmonary vasculature have been reported. If the implant is located in the chest, surgical or endovascular procedures may be needed for removal; healthcare professionals familiar with the anatomy of the chest should be consulted.

Suitable methods for localization of NEXPLANON® (etonogestrel implant) 68 mg Radiopaque:

- Two-dimensional X-ray
- Ultrasound scanning with a high-frequency linear array transducer (10 MHz or greater)
- X-ray computerized tomography (CT scan)
- Magnetic resonance imaging (MRI)

	IMPLANON Non-radiopaque Implant	NEXPLANON Radiopaque Implant
Visible with X-ray	NO	YES
Visible with ultrasound	YES	YES
Visible with CT scan	NO	YES
Visible with MRI	YES	YES

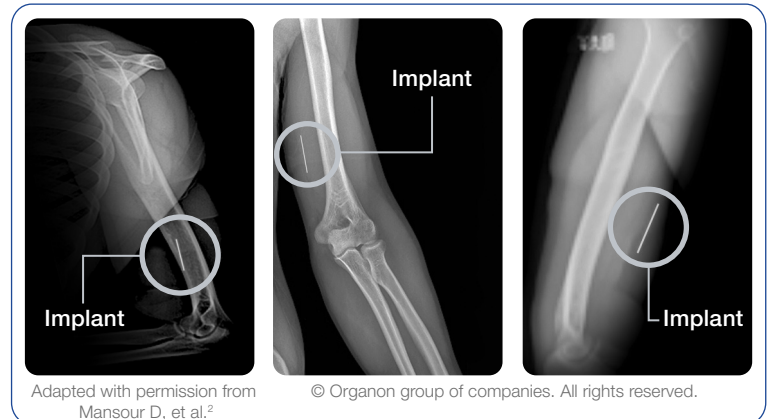
INSTRUCTIONS FOR X-RAY LOCALIZATION

X-ray localization

NEXPLANON is a radiopaque implant that contains barium sulfate that allows it to be located using a 2-dimensional X-ray. When located using X-ray, the implant will appear as a faint white linear object.¹

To locate NEXPLANON® (etonogestrel implant) 68 mg Radiopaque using X-ray:

- Conduct an X-ray of the upper arm where the implant was inserted
- Consult the X-ray images to locate the approximate position of NEXPLANON
- For more precise location of the implant, use ultrasound, CT scan, or MRI



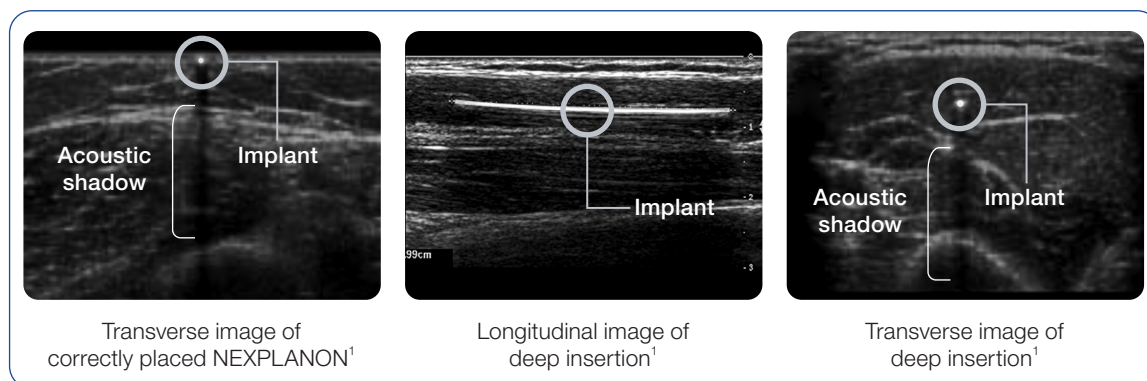
INSTRUCTIONS FOR ULTRASOUND LOCALIZATION

Ultrasound localization¹

For ultrasound localization, **4** specific requirements should be followed:

- 1.** The correct probe is a linear array transducer
- 2.** The frequency that should be used is at least 10 MHz. The use of a lower frequency is not recommended
- 3.** A transverse scan technique should be used
- 4.** The patient should lie on her back on the examination table with her non-dominant arm flexed at the elbow and externally rotated so that her hand is underneath her head (or as close as possible)

When attempting to locate the implant, it is advisable to first place the probe at right angles to the long axis of the implant (transverse scan). In doing this, the cross-section of the implant will produce a linear acoustic shadow. When you follow the hypodense acoustic shadow upward, you will be able to identify the hyperdense cross-section of the implant itself. Once you have identified the cross-section of the implant, you will be able to measure the depth of the implant from the skin surface.



Images enhanced for training purposes.

Once the cross-section has been identified, the probe can be moved proximally and distally along the arm to mark the ends of the implant, as determined by the absence of the acoustic shadow. Although this technique is sufficient to both locate and mark the position of the implant, it is also possible to visualize its position by turning the transducer so that it lies longitudinally. This should be performed only after correct localization using the transverse scan technique.¹

INSTRUCTIONS FOR CT SCAN LOCALIZATION

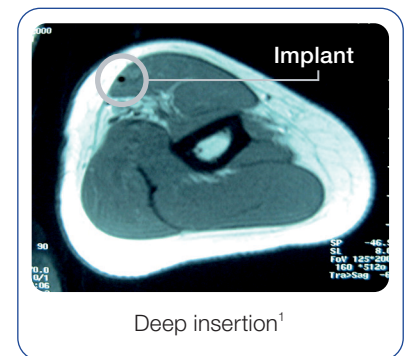
CT scan localization

NEXPLANON® (etonogestrel implant) 68 mg Radiopaque is a radiopaque implant that contains barium sulfate that allows it to be located using CT scan. When located using a CT scan, the implant will appear as a white linear object.

INSTRUCTIONS FOR MRI LOCALIZATION

MRI localization^{1,3}

- NEXPLANON produces a low/no signal return and can be identified as a black structure. It is therefore important to render the structures around the implant as bright as possible
- If the implant is located in fat, it is advisable not to use fat suppression
- The best sequence is a 3-D gradient-echo weighted sequence, which renders fat, muscles, and tendons with intermediate to high signals
- If the implant is close to a vessel, gadolinium contrast can be used to enhance the image of the vessel and allow clearer discrimination



ULTRASOUND-GUIDED REMOVAL

- Following successful imaging, it is advisable to remove the implant under ultrasound guidance. For further instructions, call 1-844-674-3200.

FAILED LOCALIZATION

There have been reports of migration of the implant; usually this involves minor movement relative to the original position, but may lead to the implant not being palpable at the location in which it was placed. This may complicate localization of the implant by palpation, ultrasound, CT, and/or MRI, and removal may require a larger incision and more time.

If the implant cannot be found in the arm after comprehensive localization attempts, consider applying imaging techniques to the chest as events of migration to the pulmonary vasculature have been reported. If the implant is located in the chest, surgical or endovascular procedures may be needed for removal; healthcare professionals familiar with the anatomy of the chest should be consulted. If at any time these imaging methods fail to locate the implant, etonogestrel blood level determination can be used for verification of the presence of the implant. For details on etonogestrel blood level determination, call 1-844-674-3200 for further instructions. If the woman is ever unsure about whether the implant is present (she is unable to feel the implant), she should be advised to immediately contact her physician and use alternative contraception until the presence of the implant can be confirmed.

If the imaging results are inconclusive, the presence of the implant can be verified by ENG (etonogestrel assay) determination. Please contact manufacturer at 1-844-674-3200 for further guidance.

References:

1. Shulman LP, Gabriel H. Management and localization strategies for the nonpalpable Implanon rod. *Contraception*. 2006;73(4):325–330.
2. Mansour D, Mommers E, Teede H, et al. Clinician satisfaction and insertion characteristics of a new applicator to insert radiopaque Implanon: an open-label, noncontrolled, multicenter trial. *Contraception*. 2010;82(3):243–249.
3. Merki-Feld GS, Brekenfeld C, Migge Be, et al. Nonpalpable ultrasonographically not detectable Implanon rods can be localized by magnetic resonance imaging. *Contraception*. 2001;63:325–332.



Nexplanon[®]
(etonogestrel implant) 68mg
Radiopaque