

# Here, there is no room for doubt

the risk of complications.(1)

In case of suspicion, confirm your diagnosis intraoperatively with Indigo carmine Provingo®.(2)





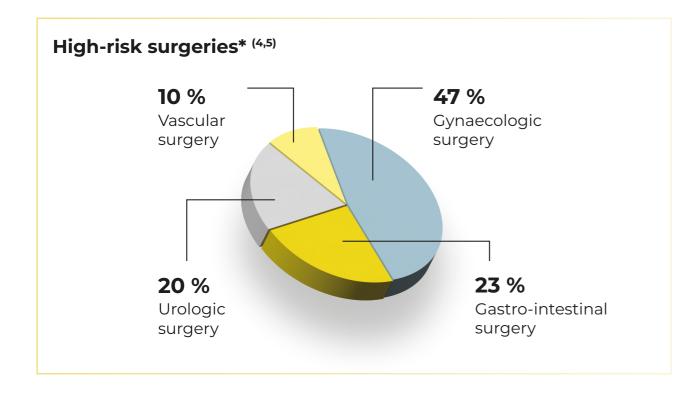


This medicinal product is for diagnostic use only. Indigo carmine Provingo® is indicated for the intra-operative detection of suspected ureteral injuries during abdominal and pelvic surgery.(2)



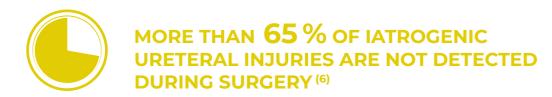
# > latrogenic ureteral injuries

# IATROGENIC URETERAL INJURIES USUALLY OCCUR DURING ABDOMINAL AND PELVIC SURGERY (1,3)

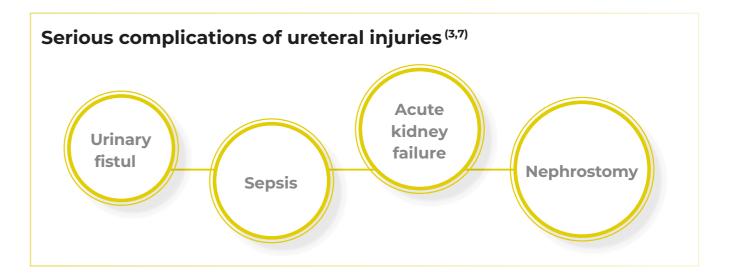


MANY POSSIBLE CAUSES (3)

- > Ligation or kinking with a suture
- > Crushing from a clamp
- > Partial or complete transection
- > Thermal injury
- > Ischaemia from devascularisation



# EARLY DIAGNOSIS OF URETERAL INJURIES IS ESSENTIAL TO PROVIDE BETTER OUTCOMES TO THE PATIENTS. (3,6)



# > Diagnostic colouration with indigo carmine

latrogenic injury may be noticed during the primary procedure, when intravenous dye (e.g. indigo carmine) is injected to exclude ureteral injury<sup>(3)</sup>





# REDUCED RISK OF POST-OPERATIVE COMPLICATIONS FOR PATIENTS (1)

- > Effectiveness of the carmine indigo test, with a specificity >99% (2)
- > Prevention of severe complications avoiding delays in diagnosis (1)
- > Immediate management of the identified ureteral injuries (2)



### SIMPLE TO USE FOR SURGEONS (2)

- Colouration of urine (in dark blue) within 4 to 9 minutes after the injection
- > Identification of the ureter tracks
- > Confirming the ureteral patency

# > Product presentation



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# DYE OF CHOICE (2)

- > Sterile solution for IV injection
- > Slow intravenous injection under monitoring of arterial pressure and heart rate

# **DIAGNOSTIC PERFORMANCE** (2)

- > Intense colouration of urine within 4 to 9 min
- > High sensitivity and specificity of the test with indigo carmine (89.2% and 99.7% respectively)
- > Significant impact on the diagnostic process (PPV of 86.7% and NPV of 99.7% in a population with an incidence of ureteral lesions of 2.3%)

# HIGH QUALITY STANDARDS (8) > Purity of indigo carmine ≥ 97.5% Provingo\* 40 mg/s mL | Now year evident/file spoil/9] | Provingo\* 40 mg/s mL | Now year evident/file spoil/9] | Provingo\* 55 mL | Shelf life: 3 years

## Safety information (2):

- > Contraindications: Hypersensitivity to the active substance or to any of the excipients.
- > **Undesirable effects:** The most common adverse reactions of indigo carmine are mainly related to its alpha-adrenergic activity and are of cardiovascular origin Very common (≥ 1/10): Hypertension (transient) and bradycardia, especially in patients under general anaesthesia or under spinal anaesthesia Other idiosyncratic reactions such as changes in blood pressure or heart rate or anaphylactoid reactions have also been described. Serious adverse reactions of indigo carmine are very rare.
- > Special warnings and precautions for use: The use of a filter is recommended at the time of intravenous administration. It is necessary to monitor heart rate and blood pressure during and a few minutes after the injection. Intravenous injection should be stopped if the following symptoms occur: bradycardia, tachycardia, hypotension, hypertension, rash or erythema, respiratory symptoms such as dyspnea or bronchospasm Indigo carmine Provingo should not be used in patients with clearance of creatinine < 10 mL/min (onset in urines may be delayed for several minutes) Indigo carmine may interfere with pulse oxymetric methods A discolouration of urine may be observed following administration of indigo carmine. Indigo carmine should be used with caution in case of: concomitant use of medicines inducing bradycardia, heart rate and conduction disorders, high blood pressure, low heart rate, coronary disorders due to its peripheral vasoconstrictor effect. The use of indigo carmine should be avoided in patients with: uncontrolled heart failure, history of allergic reactions, hemodynamic instability.
- > Pregnancy: Indigo carmine Provingo is not recommended during pregnancy and in women of childbearing potential not using contraception.
- > Breast-feeding: A risk to the newborns/infants cannot be excluded. A decision must be made whether to discontinue breast-feeding or to discontinue/abstain from indigo carmine therapy taking into account the benefit of breast-feeding for the child and the benefit of therapy for the woman.









40 mg ampoule of indigo carmine (indigotine) diluted in 5 ml of water for injection

# > In practice





dose: 1 ampoule of 5 mL (2)





A second ampoule may be injected 20 to 30 minutes after the first injection if necessary (2)

# > Distributor and contact



120 Kifisias av., 151 25 Marousi Tel 210-6194170 mail: info@avipharma.gr

### References:

1. Siff LN, et al. Intraoperative Evaluation of Urinary Tract Injuries at the Time of Pelvic Surgery: A Systematic Review. Female Pelvic Med Reconstr Surg. 2018;26(11):655-663. 2. Indigo carmine Provingo® 40 mg/5 ml - Summary of product characteristics -Nov 2023. 3.Kitrey N.D. et al, EAU Guidelines. Edn. presented at the EAU Annual Congress, Amsterdam, the Netherlands. 2022. 4. Klap J. et al, Etiologie et traitements des plaies iatrogènes de l'uretère : analyse de la littérature, AFU (French Association of Urology). Prog Urol. 2012;15(22):913-919. 5. Karmouni T. et al, Prise en charge urologique des traumatismes iatrogènes de l'uretère. Prog Urol. 2001;11:642-646. 6. Brandes S, Coburn M, Armenakas N, McAninch J. Diagnosis and management of ureteric injury: an evidence-based analysis. BJU Int. 2004;94(3):277-89. 7. Blackwell RH. et al, Complications of Recognized and Unrecognized latrogenic Ureteral Injury at Time of Hysterectomy: A Population Based Analysis. J Urol. 2018;199(6):1540-1545. 8. CoA Indigo carmine Provingo® API - Results analysis - Batch 4015/2/002/21.

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