The treatment of numerous retinal disorders is based on intravitreal injection (IVT) of a medication. The objective of these guidelines is to specify the practical conditions in which IVT is performed so as to limit the risks of this mode of administration: infection and damage to ocular structures (retina, lens).

IVT is performed by an experienced ophthalmologist. It is recommended not to inject both eyes simultaneously on the same day. However, in exceptional cases, both eyes can be injected on the same day, provided that all of the material used is renewed for each eye.

The procedure is carried out on an out-patient basis, with no hospitalization.

**The IVT room**

The procedure can be performed at the hospital, in an outpatient clinic, or in a doctor’s office.

A dedicated clean room rather than an operating room can be used, with a minimal set-up.

Ordinary aseptic rules should be respected to reduce bacterial contamination of tissues.

This room must be free from interruptions during the IVT session and the surfaces must be washable.

Resuscitation facilities, comparable to the material required for fluorescein angiography, must be immediately available for resuscitation purposes.

The surgeon must have hand-washing facilities nearby that are regularly maintained.

Resterilizable or single-use materials must be traceable.

Using a maximum of single-use materials is recommended. The room should be equipped such that the patient can be installed comfortably in a semi-seated or dorsal decubitus position during the IVT procedure.

The use of intraoperative microscopy is not necessary.

**Before the injection**

It is indispensable to inform the patient of the advantages and the potential risks related to the IVT procedure.

Patients are given an informational leaflet such as that designed jointly by the SFO and the SNOF and written consent is obtained, which is kept in the patient’s file on the day of the injection.

The patient is requested not to use make-up on the day of the injection.
It is not necessary to interrupt anticoagulant therapy or platelet aggregation inhibitors. Any local infection found before the IVT procedure (e.g., infectious conjunctivitis, progressive infectious blepharitis, dacryocystitis) contraindicates IVT. Antibiotic prophylaxis in antibiotic eye drops can be provided for 3 days or this can be provided during the hour preceding the injection. It is not indispensable, as there is no scientific proof of its necessity. Oral antibiotics are not indicated.

Preparation for the injection and the injection itself

It is not necessary to dilate the pupil. The surgeon must wear a mask, a scrub cap, and a clean coat. The patient must wear a bouffant cap. The ocular surface is anesthetized by an instillation of single-dose oxybuprocaine or tetracaine hydrochloride eye drops. After hand washing with 10% povidone iodine (Betadine®) or with a hydroalcoholic solution, the surgeon wears sterile gloves during the entire procedure. The syringe containing the product to inject is prepared in sterile conditions by the injector or an accredited pharmacy. The area is swabbed with ophthalmologic 5% povidone iodine (Betadine®) with instillation of the conjunctive and the superior and inferior conjunctival fornices. The edges of the eyelids should not be compressed as they contain the meibomian glands. A sterile operative field is prepared on the patient’s face. The sterile lid speculum is indispensable so as to prevent any contact between the needle and the margins of the eyelids or the eyelashes. Additional topical anesthesia can be instilled if necessary. A subconjunctival injection of 2% lidocaine chloridehydrate (Xylocaine®) with no epinephrine near the point of injection is sometimes provided. A new instillation of 5% povidone iodine (Betadine®) can be given on the conjunctiva, particularly at the intravitreal injection site, immediately before the IVT. The intravitreal injection is done at the pars plana between 3 and 4 mm from the limbus corneae. Forceps can be used to limit ocular movements. The needle is inserted to the hilt through the conjunctiva, if possible off center, and through the sclera, perpendicular to the eye wall, aiming toward the center of the globe. The therapeutic agent is injected slowly, then the needle is removed slowly. A sterile cotton-tipped applicator can be used at the injection point to prevent reflux. Check that the patient is able to perceive light in the injected eye. An antibiotic eye drop is instilled.

After IVT

If no incident has occurred during injection, no particular precaution is recommended. An eye patch is not necessary. An antibiotic eyedrop is often prescribed after the injection. Patients should be instructed on any signs or symptoms (redness, pain, blurred vision) that may suggest complications requiring emergency care. Patients are given telephone numbers to call in case of emergency with the necessary explanations. The patient will be seen in consultation following the usual monitoring procedures for the disease treated and/or the pharmacological substance injected.