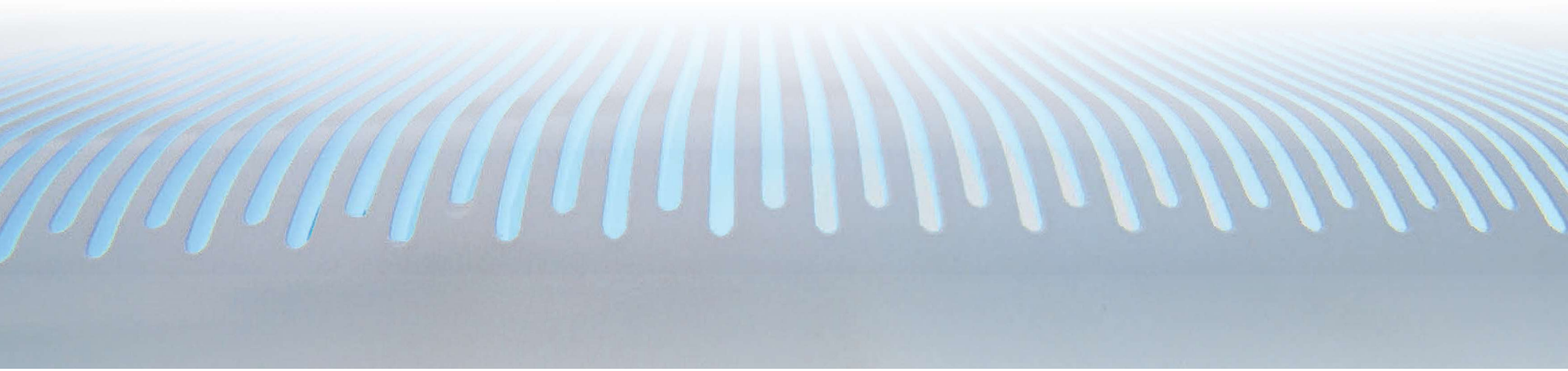
26.1 Mikrobangų abliacijos aplikatoriai

26.2 Prietaisas, skirtas navikų abliacijai, panaudai

TATO

Thermal Ablation Treatments for Oncology



Thermal Ablation Treatments for Oncology

1 day to eliminate the cancer

Thermal ablation is the permanent destruction of targeted tissues caused by a local increase of temperature.

Thermal ablation procedures are minimally invasive alternatives to surgical resection. They are performed in Day-Hospital and are associated with a significant reduction of operative mortality and hospitalization costs.

TATO is a compact, mobile and highly efficient multi-applicator thermal ablation device.

2 market-leading technologies

TATO is a microwave thermal ablation device.

Compared to the older radiofrequency technology, MWA can generate higher temperatures in less time since tissue charring does not hinder the radiation of the microwaves and it is less susceptible to the heat-sink effect of peritumoral vessels.

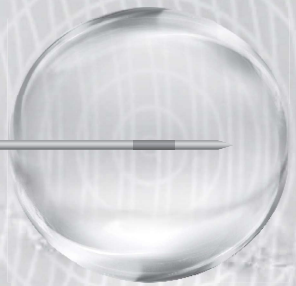
Significant reduction of side effects:

Comet effect

Charring

Chimney effect

optimal ablation shape



TATO

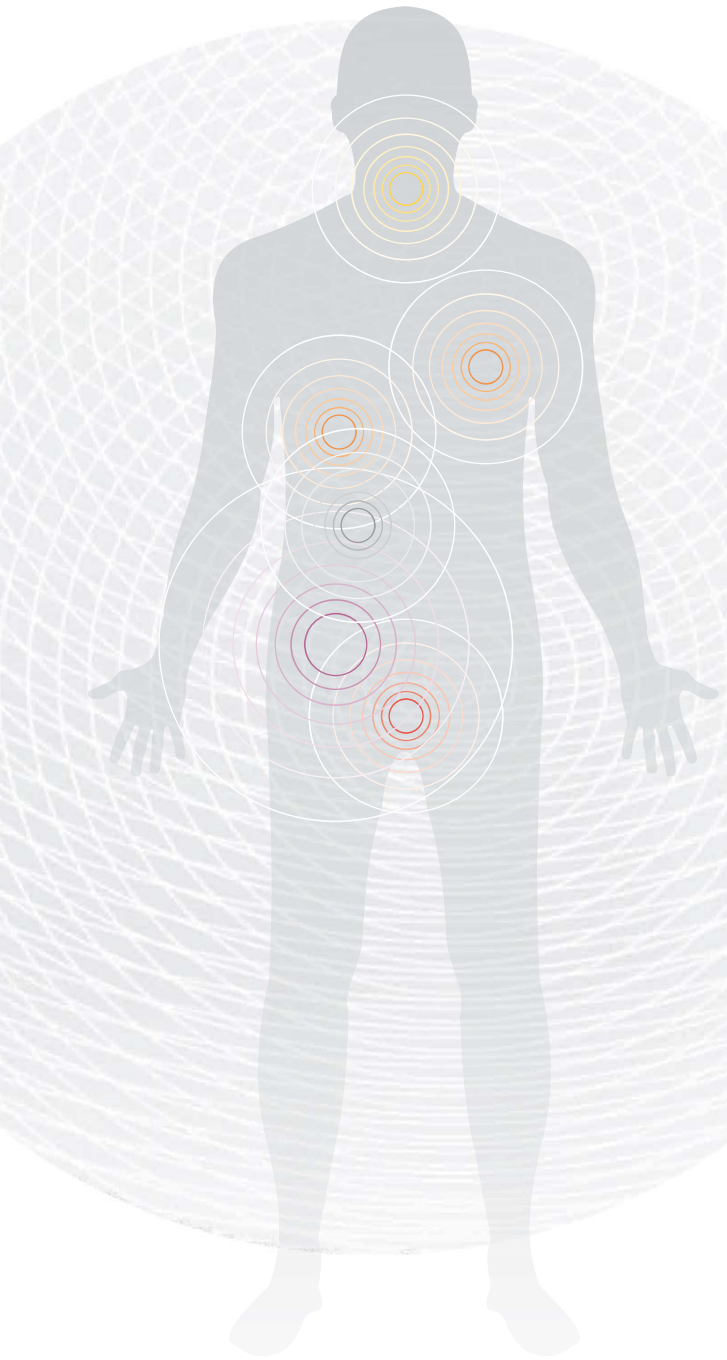
3 reasons to choose TATO

Efficiency: TATO and TATOpro applicators are designed to minimize energy losses.
The VLL™ (Very Low Loss) technology allows the applicators to operate, in absence of a cooling system, without causing skin burns.

26.2.7

Modularity: TATOpro applicators come in various sizes, ranging from 11G to 18G.
They are suitable both to perform small, highly precise ablations and to treat big multifocal tumors.

Safety: TATO has an automatic real-time safety control loop that stops the emission of MW power in case a state of malfunctioning of the applicator is detected.



Multi-applicator for multi-applications

The possibility of planning an highly accurate treatment of tumor masses of very different sizes and shapes opens up new perspectives in the thermal ablation field.

New applications are being studied on organs that rarely receive treatment with MW thermal ablation such as prostate, thyroid, breast and bones that will soon be able to benefit from all its advantages.

TATOpro applicators use the VLL™ (Very Low Loss) technology
that intrinsically limits the overheating of the shaft, resulting
in the absence of a complicate and unreliable cooling system.

As an additional safety measure,
TATOpro applicators come with a small, magnetic temperature clamp:
a special accessory that uses sensitive liquid crystal labels to monitor the temperature
directly on the shaft.

Design

Very thin handles with ergonomic grip and color code

Precision

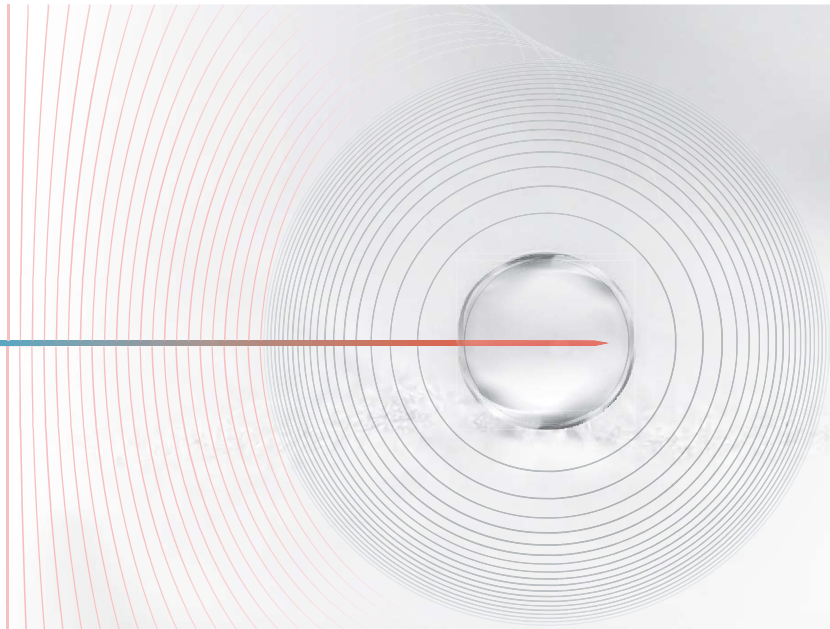
Definite and controllable lesions for one or multiple tumors

Modularity

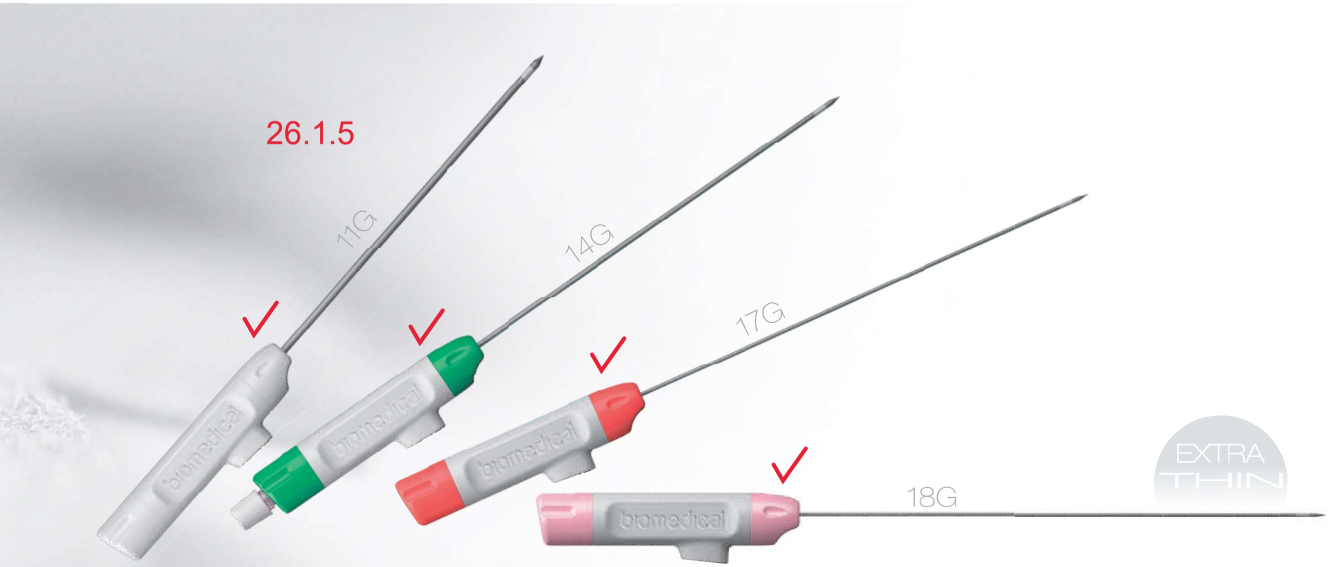
Probes of any Gauge and length can be combined

Optimal Shape

0.9 sphericity index with two uncooled applicators



TATOpro



Size

TATOpro applicators are available in 11, 14, 17 and 18G

Reusable Cable

The low loss MW cable can be detached and sterilized

Liquid Injections

TATOpro applicator allow injecting liquids into the diseased tissue

Multi Applicator

4 applicators controlled with one single interface

The power of 4

Thanks to the FSS™ (Fast Sequential Switching) technology, built inside the automatic power distribution unit, TATO is able to handle up to four applicators with a single generator.

Interventional radiologists and surgeons will be able to operate big multifocal cancers or up to four dislocated metastasis in a single 10 minutes session.

✓ 26.1.6

TATOpro applicators are covered with Teflon, which makes them echogenic, self-lubricating and non-sticky.

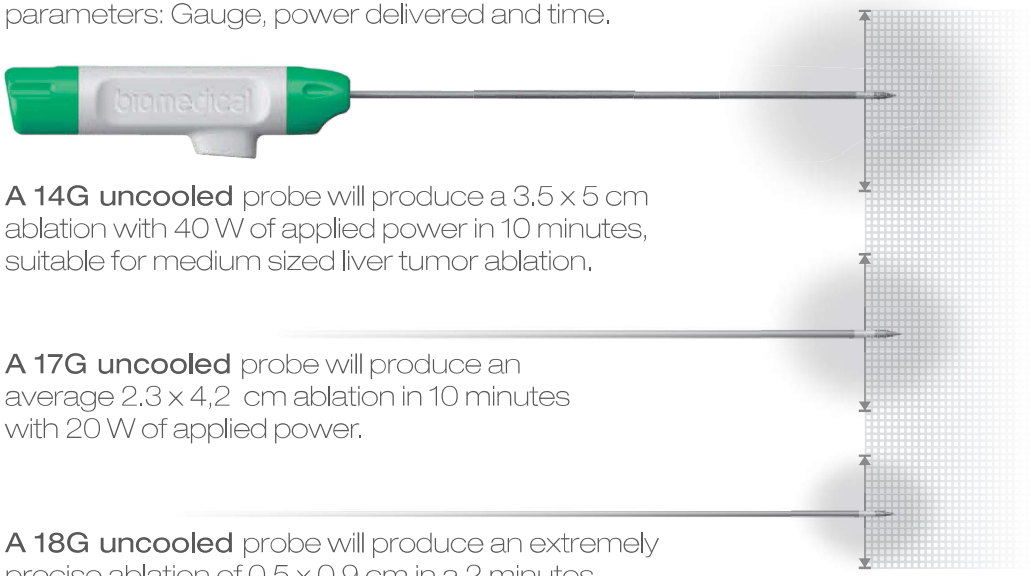
TATOpro handles are the first one that come with a detachable and reusable cable, allowing an easier than ever placement of the applicator, which is especially useful for CT-scan positioning.

TATOpro applicators can be equipped with a luer lock connector for injecting drugs, alcohol, saline solution or microbubbles during the ablation treatment.

Finally, TATOpro is the first MW hollow probe that allows the insertion of an electromagnetic navigation sensor, to achieve a very high positioning accuracy.

Single applicator treatment

A single TATOpro applicator can perform ablations of different sizes depending on three treatment parameters: Gauge, power delivered and time.



A 14G uncooled probe will produce a 3,5 x 5 cm ablation with 40 W of applied power in 10 minutes, suitable for medium sized liver tumor ablation.

A 17G uncooled probe will produce an average 2.3 x 4,2 cm ablation in 10 minutes with 20 W of applied power.

A 18G uncooled probe will produce an extremely precise ablation of 0.5 x 0.9 cm in a 2 minutes application with only 10 W of applied power, suitable for small nodule ablations.

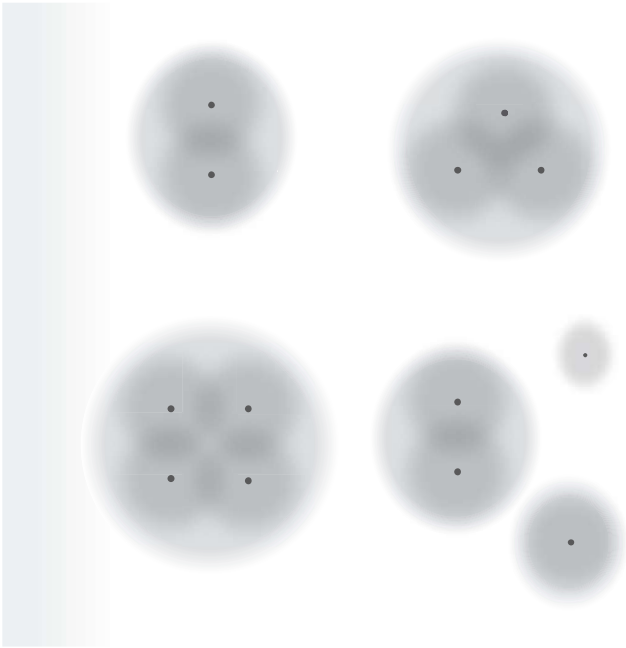
From 3.5 x 5 cm
to 0.5 x 0.9 cm

Ablation shape possibilities

A spherical 6 x 6 cm ablation for the treatment of big multifocal tumors (3 probes).
The simultaneous treatment of multiple metastases (2, 3 or 4 probes).
Ablating the Parenchymal Transection Margin to reduce blood loss during a surgical liver resection (2, 3 or 4 probes).

Different configuration in shape and power

Big lesions basic shape with multiple needles

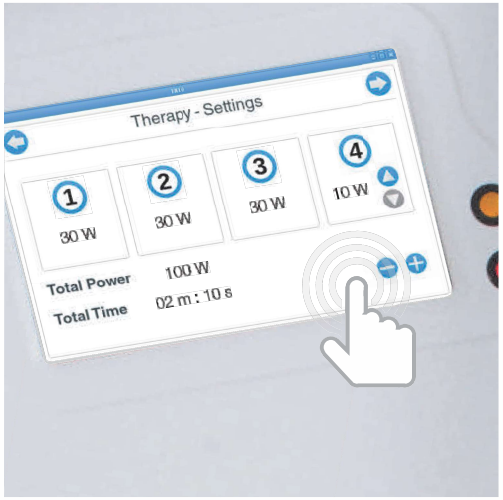


Available for liver resection

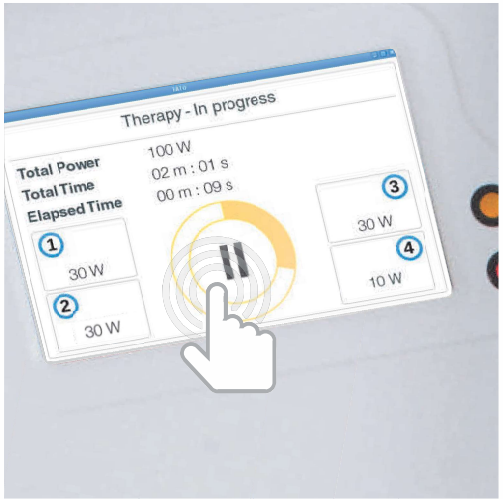
Simple

Easy interface design.
Full control of the ablation process

TATO can be completely controlled via an intuitive easy to use touchscreen Human Machine Interface.
The user will be able to fully set up the device in few minutes following a simple 7 step wizard.

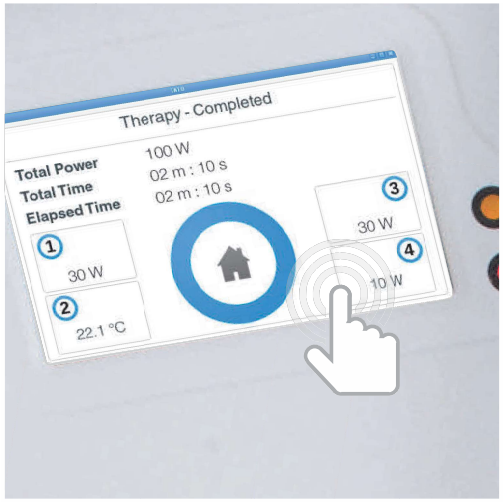


Time and power settings for each applicator can be checked and modified on a single step of the configuration wizard.
A maximum of 100 W can be distributed among the applicators and the recommended treatment duration is 10 minutes.



The Human Machine Interface allows pausing the treatment and adjusting the MW power emitted by each applicator output depending on the feedback from imaging systems.

Simultaneous monitoring of all the applicators in use on the same display.



✓ The power switching unit is designed to host from 1 to 4 applicators at the same time and to deliver the energy emitted by the generator to each one of them in the amount established by the operator.

26.2.10

TATO main unit comes equipped with USB port, a lit power button and two indicator lights: a yellow light that illuminates when the generator is running and a red one that will light in case a state of malfunctioning is detected.

The adjustable arm allows bringing the power switching unit closer to the bed of the patient, reducing encumbrance and allowing the use of shorter cables, which results in a further reduction of energy losses.

A low loss MW coaxial cable connects TATO main unit to the Switch where TATOpro probes are connected, further reducing energy losses.

TATO main unit, integrating MW generator, power supply, system processor and touchscreen display, has a very compact design (36 cm x 31 cm x 13 cm) and weights 7.5 Kg.

The cart is equipped with a cable reel and a container for manual and accessories.

Ergonomic handle allows moving the entire device easily with one hand.

5 self-locking wheels cart guarantees compliance with general requirements for basic safety and essential performance EN60601-1 3rd edition.