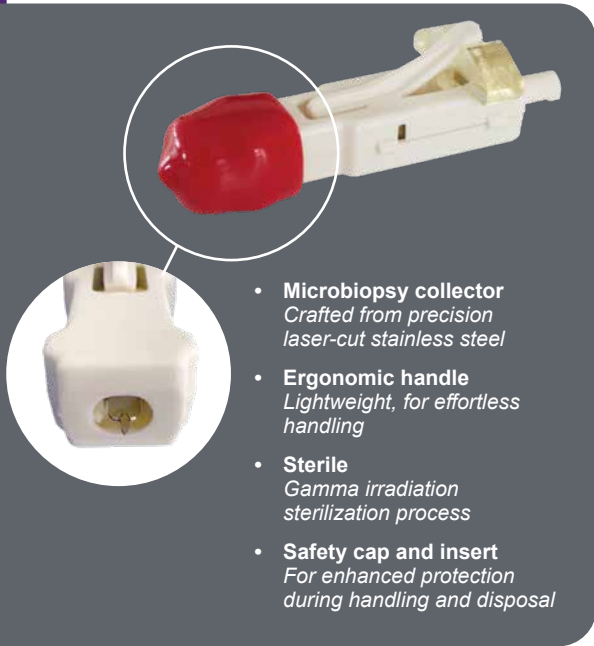


Harpera™ Microbiopsy™ Punch

Facilitate rapid, suture-free, virtually painless skin biopsy procedures.

What is skin Microbiopsy™?



- **Microbiopsy collector**
Crafted from precision laser-cut stainless steel
- **Ergonomic handle**
Lightweight, for effortless handling
- **Sterile**
Gamma irradiation sterilization process
- **Safety cap and insert**
For enhanced protection during handling and disposal

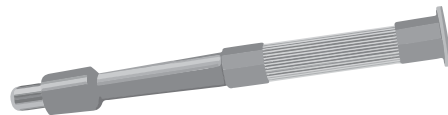
The patented Microbiopsy technology is at the heart of the Harpera™, featuring a Microbiopsy collector crafted from high-precision laser-cut stainless steel.

The Microbiopsy collector is designed for virtually pain-free skin penetration, collecting thousands of skin cells in a single punch.

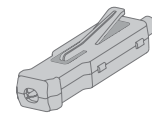
The handle allows safe and easy manipulation during the sampling procedure and the retrieval of the Microbiopsy specimen.










Comparison of Biopsy vs. Microbiopsy Punch



Traditional Biopsy Punch



Harpera Microbiopsy Punch

	Traditional Biopsy Punch	Harpera Microbiopsy Punch
 Invasiveness	Requires cutting a ø3-6 mm piece of skin tissue	Collects a micro specimen, with a small puncture (0.1 x 0.5 mm)
 Procedure time	Takes about 15-30 minutes	Takes few seconds
 Pain level	Typically requires local anesthesia	Does not require anesthesia
 Wound care	Requires stitches and/or wound dressing	No stitches, minimal wound No scar
 Recovery	Recovery time can be several days to weeks, depending on the biopsy site	Faster healing, typically within a few days
 Cost	Physician and nurses required to perform procedure 30 USD of materials 80 USD for whole procedure ¹	Any healthcare provider (i.e. nurse) can perform procedure 20 USD in materials Est. 30 USD for whole procedure
 Frequency	Not suited for multiple biopsies in narrow time window	Suited for frequent sampling at one site and/or over time

¹ Matsumoto, M., et al. (2018). "Estimating the cost of skin cancer detection by dermatology providers in a large health care system." J Am Acad Dermatol 78(4): 701-709 e701.

FACT Harpera Microbiopsy Punch provides a highly efficient and minimally invasive skin biopsy solution particularly suited for modern molecular analytical techniques.



Benefits of Microbiopsy

Minimally invasive

The Microbiopsy punch design offers a virtually painless, suture-free experience, ideal for collecting specimens in sensitive areas, such as the face.

Precision sampling

Collects specimens within and at vicinity of targeted site. Suitable for all topical sampling procedures.

Ease of use

Designed with a controlled punch for easy sampling and safe handling before and after the procedure. The Harpera facilitates specimen collection in the clinic or out in the field.

Versatility

Offering an advanced method for collecting specimens in various environments suitable for a range of clinical and research dermatology applications.

Microbiopsy. Poised to revolutionize dermatological research.



Skin cancer

Jain, M., et al. (2022). "Minimally invasive Microbiopsy for genetic profiling of melanocytic lesions: A case series." J Am Acad Dermatol 87(4): 903-904.

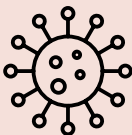
Tan, J.-M., et al. (2015). "BRAF Wild-Type Melanoma in Situ Arising in a BRAF V600E Mutant Dysplastic Nevus." JAMA Dermatology 151(4).



Skin disorders

Yamada, M., et al. (2020). "Microbiopsy-based minimally invasive skin sampling for molecular analysis is acceptable to Epidermolysis Bullosa Simplex patients where conventional diagnostic biopsy was refused." Skin Res Technol.

Preis, S., et al. (2022). "Munich atopy prediction study (MAPS): protocol for a prospective birth cohort addressing clinical and molecular risk factors for a topic dermatitis in early childhood." BMJ Open 12 (9):e059256.



Infectious skin disease

Carter, E., et al. (2023). "A feasibility study of controlled human infection with intradermal Bacillus Calmette-Guerin (BCG) injection: Pilot BCG controlled human infection model." Wellcome Open Res 8: 424.

Owen, S.I., et al. (2021). "Evaluation of qPCR on blood and skin microbiopsies, peripheral blood buffy coat smear, and urine antigen ELISA for diagnosis and test of cure for visceral leishmaniasis in HIV-coinfected patients in India: a prospective cohort study." BMJ Open 11(4): e042519.



General dermatology

Primiero, C. A., et al. (2024). "Skin 2.0: How Cutaneous Digital Twins Could Reshape Dermatology." J Invest Dermatol.

Lin, L.L., et al. (2013). "Microbiopsy engineered for minimally invasive and suture-free submillimetre skin sampling." F1000Res 2: 120.

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Join the Microbiopsy movement embraced by top organizations around the world.



The Harpera™ Microbiopsy™ Punch is intended to enable the collection of a specimen from the cutaneous skin surface by a healthcare professional for clinical studies and is currently supplied globally as an investigational use only (IUO) product. The performance characteristics of this device have not been fully validated. Subject to Trajan's Terms & Conditions, which may be viewed at www.neoteryx.com/site-terms-of-use-neoteryx. Neoteryx® is a registered trademark owned by Trajan Scientific Australia Pty Ltd. Harpera™ and Microbiopsy™ are trademarks owned by Trajan Scientific Australia Pty Ltd.