

boards fodder

HA gel technology for currently available HA fillers

by Natalie M. Curcio, MD, MPH

HA gel technology	U.S. company	Examples
CPM™ (Cohesive Polydensified Matrix)	MERZ AESTHETICS®	Belotero® Balance
PNT™ (Preserved Network Technology)	TEOXANE products with U.S. distribution by Revance	RHA® 2 RHA® 3 RHA® 4
NASHA™ (Non-animal stabilized HA)	Galderma	Restylane®-L Restylane®-Lyft Restylane®-Silk
XpresHAN Technology™/ OBT™ (Optimal Balance Technology)	Galderma	Restylane® Defyne Restylane® Refyne Restylane® Kyss
HYLACROSS™	Allergan™	Juvéderm® Ultra XC Juvéderm® Ultra Plus XC
VYCROSS™	Allergan™	Juvéderm® Volbella XC Juvéderm® Vollure XC Juvéderm® Voluma XC
Thioxif Technology™	Prollenium®	Revanesse® Versa™



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CPM® (Cohesive Polydensified Matrix): proprietary crosslinking process using low and high molecular weight HA to produce a smooth, flexible gel

PNT (Preserved Network® Technology): Utilizes longer HA chains that are less cross-linked leading to a dynamic structure with natural viscoelastic properties

NASHA™ (nonanimal stabilized hyaluronic acid): firmer gels, used to create projection and definition.

XpresHAN™ Technology/OBT™ (Optimal Balance Technology): Uses a range of HA cross-linking and gel calibration (particle size), designed to increase softness and flexibility.

HYLACROSS™ Technology: Utilizes crosslinked high molecular weight HA

VYCROSS™ Technology: Utilizes primarily crosslinked low molecular weight HA (90%) and high molecular weight HA (10%); designed to last longer vs. earlier generation HA fillers with less swelling.

Thiofix® Technology: provides a higher rate of homogenous cross-linking using shear rate mixing and proprietary wet-milling process to produce spherical particles

Micheels, P, et al. Rheological Properties of Several Hyaluronic Acid-Based Gels: A Comparative Study. *J Drugs Dermatol.* 2018 Sep 1;17(9):948-954.

Micheels, P, et al. Effect of Different Crosslinking Technologies on Hyaluronic Acid Behavior: A Visual and Microscopic Study of Seven Hyaluronic Acid Gels. *J Drugs Dermatol.* 2016 May 1;15(5):600-6.