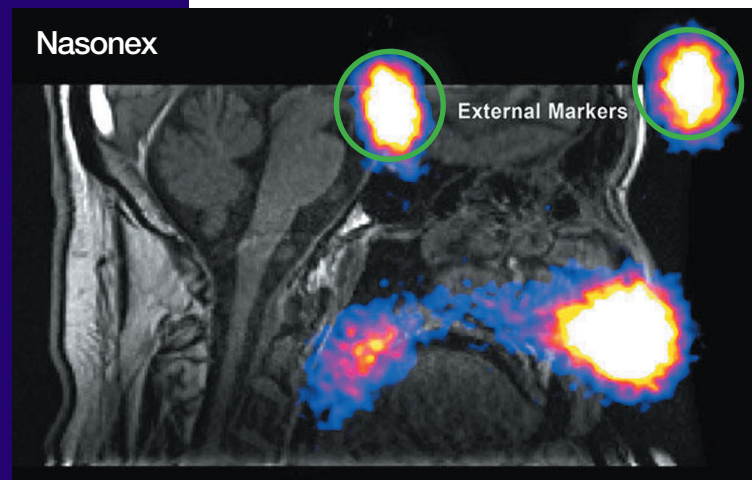
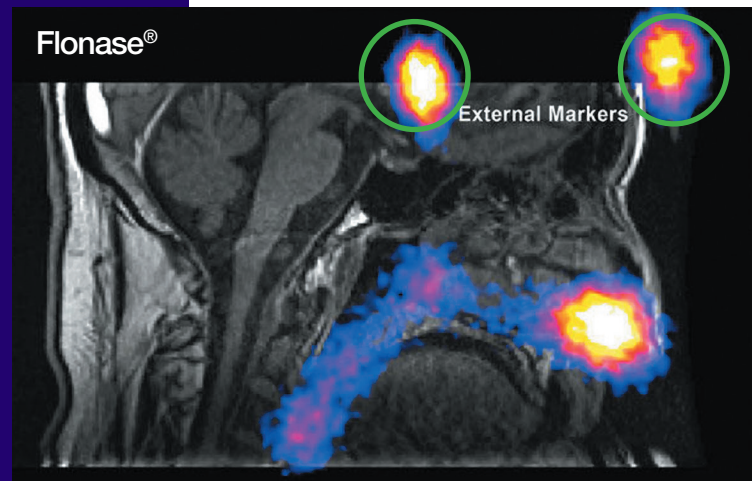
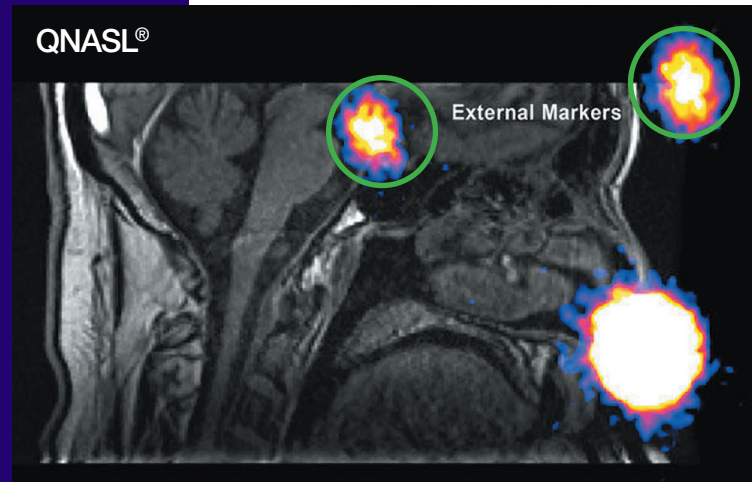


# Where do you want to deliver a topical steroid when treating nasal polyps?

Deposition with conventional intranasal steroids occurs predominantly in the anterior portion of the nasal cavity<sup>1</sup>

- Minimal deposition within the turbinates, ostiomeatal complex, and posterior nasal regions where most polyps originate<sup>1-4</sup>
- Most studies suggest that conventional intranasal steroids do not reach the paranasal sinuses even after endoscopic sinus surgery<sup>5</sup>
- The clinical relevance of different deposition patterns has not been established



## LEGEND

○ External Markers

Example of single-photon emission computed tomography (SPECT)/MRI images for QNASL®, Flonase®, and Nasonex. Images show 2 external fiducial markers used to align SPECT with MRI data.<sup>1</sup> All trademarks are the property of their respective owners.

# Optinose<sup>®</sup> Exhalation Delivery System (EDS)

## Key features<sup>6</sup>:

### Sealing nosepiece

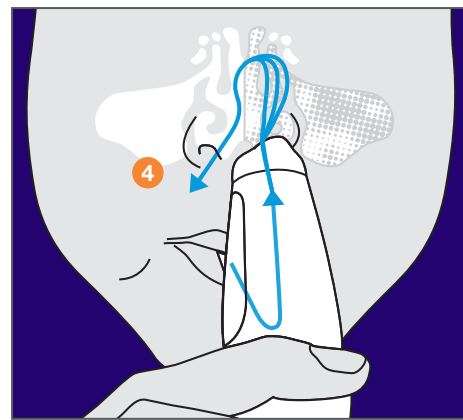
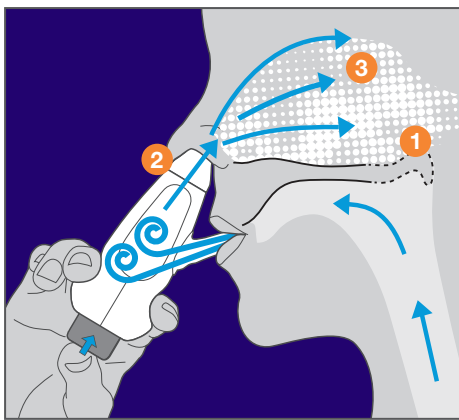
- The patented sealing nosepiece is specifically shaped to seal tightly in the nostril, act as a stent in the nasal valve, and allow for the transfer of pressure from the mouth into the nose

### Flexible mouthpiece

- The patented flexible mouthpiece enables a broad range of patients to utilize the device while maintaining a seal in the nostril

### Nonremovable drug-filled vial

- The nonremovable drug-filled vial also acts as the actuator, releasing a burst of medication when pressed



## How it works<sup>6</sup>:

- 1 Exhalation elevates the soft palate, creating a seal that separates the nasal cavity from the oropharynx.
- 2 Air then enters the nostril through the sealing nosepiece, helping expand narrow nasal passages.
- 3 Medication entrained in the breath is deposited high and deep, flowing around anatomical structures.
- 4 Air then escapes out the opposite nostril.

## Indication and Usage:

XHANCE is a corticosteroid indicated for the treatment of nasal polyps in patients 18 years of age or older.

## Important Safety Information

**Contraindications:** Hypersensitivity to any ingredient in XHANCE.

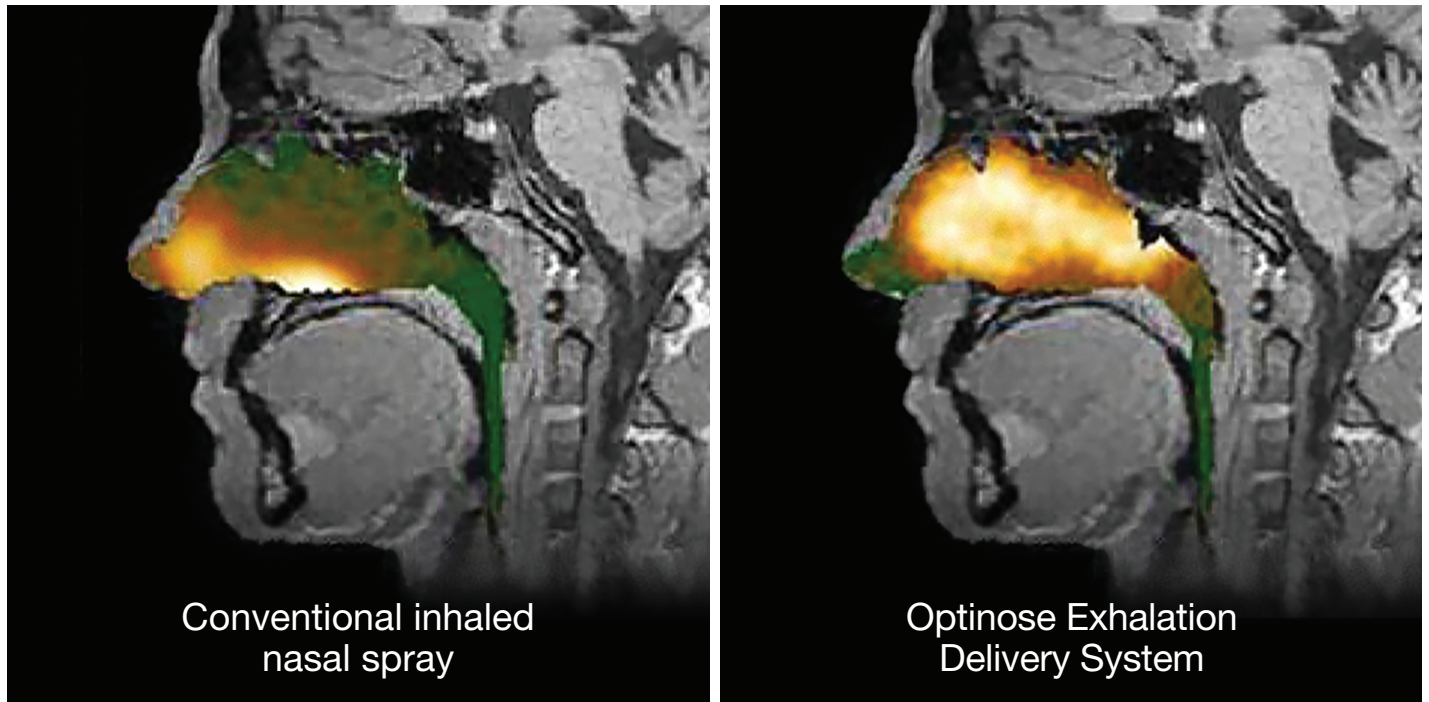
## Warnings and Precautions:

- Local Nasal Effects: epistaxis, erosion, ulceration, septal perforation, *Candida albicans* infection, and impaired wound healing. Monitor patients periodically for signs of possible changes on the nasal mucosa. Avoid use in patients with recent nasal ulcerations, nasal surgery, or nasal trauma.

**Please see additional Important Safety Information on back cover.**

## Deposition is different with exhalation

### Deposition demonstrated through gamma scintigraphy<sup>6</sup>



Gamma camera images after using a conventional inhaled nasal spray (left) or an Optinose Exhalation Delivery System with exhalation (right). Both images are from the same healthy subject taken 2 minutes after administration with radiolabeled solution and are representative of the overall findings from 211 images and 56 subjects.

**The clinical relevance of different deposition patterns has not been established.**

Exhalation delivery helps deposit medication deep into the nasal passages.<sup>7</sup>



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- Close monitoring for glaucoma and cataracts is warranted.
- Hypersensitivity reactions (e.g., anaphylaxis, angioedema, urticaria, contact dermatitis, rash, hypotension, and bronchospasm) have been reported after administration of fluticasone propionate. Discontinue XHANCE if such reactions occur.
- Immunosuppression: potential increased susceptibility to or worsening of infections (e.g., existing tuberculosis; fungal, bacterial, viral, or parasitic infection; ocular herpes simplex). Use with caution in patients with these infections. More serious or even fatal course of chickenpox or measles can occur in susceptible patients.
- Hypercorticism and adrenal suppression may occur with very high dosages or at the regular dosage in susceptible individuals. If such changes occur, discontinue XHANCE slowly.
- Patients with major risk factors for decreased bone mineral content should be monitored and treated with established standards of care.

**Adverse Reactions:** The most common adverse reactions (incidence  $\geq 3\%$ ) are epistaxis, nasal septal ulceration, nasopharyngitis, nasal mucosal erythema, nasal mucosal ulcerations, nasal congestion, acute sinusitis, nasal septal erythema, headache, and pharyngitis.

**Drug Interactions:** Strong cytochrome P450 3A4 inhibitors (e.g., ritonavir, ketoconazole): Use not recommended. May increase risk of systemic corticosteroid effects.

**Use in Specific Populations:** Hepatic impairment. Monitor patients for signs of increased drug exposure.

**Please see full Prescribing Information, including Instructions for Use, in pocket.**

### References:

1. Leach CL, Kuehl PJ, Chand R, McDonald JD. Nasal deposition of HFA-beclomethasone, aqueous fluticasone propionate and aqueous mometasone furoate in allergic rhinitis patients. *J Aerosol Med Pulm Drug Deliv.* 2015;28(5):334-340.
2. Zhong C, Jiang Z, Zhang X. Effect of distribution of nasal polyps in ostiomeatal complex on long-term outcomes after endoscopic surgery. *Eur Arch Otorhinolaryngol.* 2015;272(12):3757-3762.
3. Larsen PL, Tos M. Origin of nasal polyps: an endoscopic autopsy study. *Laryngoscope.* 2004;114(4):710-719.
4. Djupesland PG. Nasal drug delivery devices: characteristics and performance in a clinical perspective—a review. *Drug Deliv Transl Res.* 2013;3(1):42-62.
5. Siu J, Johnston JJ, Pontre B, Inthavong K, Douglas RG. Magnetic resonance imaging evaluation of the distribution of spray and irrigation devices within the sinonasal cavities. *Int Forum Allergy Rhinol.* 2019;9(9):958-970.
6. Data on file. OptiNose US, Inc.
7. Full Prescribing Information for XHANCE (fluticasone propionate). OptiNose US, Inc.; 2017.

