

neffy – the
transformative
needle-free
solution for severe
allergic reactions

43rd Annual J.P. Morgan
Healthcare Conference

January 2025



Forward-looking statements

Statements in this presentation that are not purely historical in nature are “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements in this presentation include, without limitation, statements regarding: the design and potential benefits of neffy, including the likelihood allergy patients and caregivers will choose to carry and dose neffy compared to needle-bearing options; ARS Pharma’s expected competitive position; the potential market, demand and expansion opportunities for neffy; the anticipated sales of neffy and gross-to-net percentage range; the anticipated timing for approval of the supplemental regulatory application for 1 mg neffy dose for children 15 kg to 30 kg; the timeline for commercialization of neffy outside of the United States; the potential ability of neffy to treat acute flares in patients with chronic spontaneous urticaria; the timing for initiating a single pivotal study in urticaria and potential launch; ARS Pharma’s marketing and commercialization strategies; the expected composition and reach of ARS Pharma’s commercial force; the potential for the neffy Experience Program; the likelihood of neffy attaining favorable coverage and the expected timing of coverage decisions; the timing and expected percentage of commercial coverage with unrestricted access; ARS Pharma’s projected operating runway; the anticipated benefits of ARS Pharma’s ex-U.S. partnerships; the expected intellectual property protection for neffy; and any statements of assumptions underlying any of the foregoing. These forward-looking statements are subject to the safe harbor provisions under the Private Securities Litigation Reform Act of 1995. Because such statements are subject to risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. Words such as “anticipate,” “demonstrate,” “expect,” “indicate,” “plan,” “potential,” “target,” “will” and similar expressions are intended to identify forward-looking statements. These forward-looking statements are based upon ARS Pharma’s current expectations and involve assumptions that may never materialize or may prove to be incorrect. Actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of various risks and uncertainties, which include, without limitation: risks associated with preliminary financial results, which are subject to revision based upon the company’s year-end closing procedures and the completion and external audit of ARS Pharma’s year-end financial statements; the ability to maintain regulatory approval for neffy for its current indication and obtain and maintain regulatory approval for neffy for additional indications; results from clinical trials and non-clinical studies may not be indicative of results that may be observed in the future; potential safety and other complications from neffy; the labeling for neffy in any future indication or patient population; the scope, progress and expansion of developing and commercializing neffy; ARS Pharma’s reliance on its licensing partners; the potential for payors and governments to delay, limit or deny coverage or reimbursements for neffy; the size and growth of the market therefor and the rate and degree of market acceptance thereof vis-à-vis intramuscular injectable products; net product sales may not be indicative of profitability or profitability at expected levels; reliance on survey results with small samples sizes; ARS Pharma’s ability to protect its intellectual property position; and the impact of government laws and regulations. Additional risks and uncertainties that could cause actual outcomes and results to differ materially from those contemplated by the forward-looking statements are included under the caption “Risk Factors” in ARS Pharma’s Quarterly Report on Form 10-Q for the quarter ended September 30, 2024, filed with the Securities and Exchange Commission (“SEC”) on November 13, 2024. This and other documents ARS Pharma files with the SEC can also be accessed on ARS Pharma’s website at ir.ars-pharma.com by clicking on the link “Financials & Filings” under the “Investors & Media” tab.

The forward-looking statements included in this presentation are made only as of the date hereof. ARS Pharma assumes no obligation and does not intend to update these forward-looking statements, except as required by law.





Transforming the Treatment of Type I Allergic Reactions

- **neffy®**: first and only FDA and EC approved “no needle, no injection” solution for Type I allergic reactions
- **Strong execution during first 3 months of launch in Q4 2024 sets foundation for delivering significant neffy US sales in 2025**
 - Prescribing breadth: ~50% of high decile HCPs targeted to date have prescribed **neffy**
 - Secured coverage with payers at ~50% total gross to net, and >80% commercial coverage anticipated by end of Q3 2025
- **Potential multi-billion US market opportunity (\$3 billion Rx’ed segment, and up to \$7 billion expansion segment)** driven by HCP and consumer preference and adoption¹
- **NCE-like IP exclusivity** potential with issued composition of matter and method of treatment patents until at least 2039
- **Transformational launch supported by the team that launched NARCAN nasal spray (~95% peak share) and \$314 million in cash, cash equivalents and short-term investments as of 12/31/2024**

References: 1. Company estimates

Type I Allergy Patients Face Significant Limitations with Other Treatment Options that *neffy* may help to address







PROBLEM:

ONLY 10% - 20% of patients with active Rx use as indicated⁷

SOLUTION: *neffy*



 NO TREATMENT READILY AVAILABLE	 REFUSAL OF TREATMENT	 DELAY IN TREATMENT	 USER ERROR IN TREATMENT
<p>Only 50% carry one¹ (<20% carry two)</p>	<p>~25% - 60% do not administer^{1,3 5, 6}</p>	<p>~40% - 60% of patients delay²</p>	<p>23% - 35% fail to dose correctly⁴</p>
<p>SMALL</p> <ul style="list-style-type: none"> Fits in your pocket; easy to carry the recommended 2 devices ~10% of cases require repeat doses of epinephrine¹ 	<p>NO NEEDLE NO INJECTION</p> <ul style="list-style-type: none"> Rapid administration without a needle No risk of needle-related injuries; lacerations² or cardiotoxic blood vessel injections Less hesitation to dose 	<p>EASIER AND MORE CONSISTENT DOSING</p> <ul style="list-style-type: none"> Simple place and press administration (no hold time) 100% of adults and children dosed <i>neffy</i> successfully in human factors studies by reading the commercial instructions for use (IFU) 	<p>RELIABLE</p> <ul style="list-style-type: none"> 99.999% delivery of effective dose in reliability testing; not obstructed by any anaphylaxis symptoms; no inhalation required 30-month shelf-life at room temperature, with <i>neffy</i> stored at up to 3 months at high temperatures (122°F)

Addressing the Significant Unmet Needs in US Severe Allergic Reaction Patient Population



Epidemiology prevalence data estimates
~40M patients with type 1 allergic reactions²⁻⁹



~20M diagnosed and under physician care
over the last 3 years¹⁰



6.5M prescribed epinephrine¹⁰
Primarily managed by allergists & pediatricians



~3.2M fill ~5M 2-pack units
of injectables annually, but
~80-90% do not use as indicated¹¹



~3.3M don't fill regularly,
haven't refilled or haven't filled
– an additional ~5M 2-
pack unit opportunity¹⁰



~13.5M Type I diagnosed but not
prescribed Rx (past 3 years)¹⁰

Primarily managed by non-allergists
and non-pediatricians



Consistent Market Growth (Units)
+6.5% CAGR since 2010, +12.7% YoY in 2023¹



Promotional Responsiveness
~50% increase over market growth trend with
consumer promotion (2010 to 2015)¹

~10M two-packs X \$710 WAC/Rx X ~50% GTN Yield =

~\$3B+ peak net sales potential
in initial addressable segments alone

+

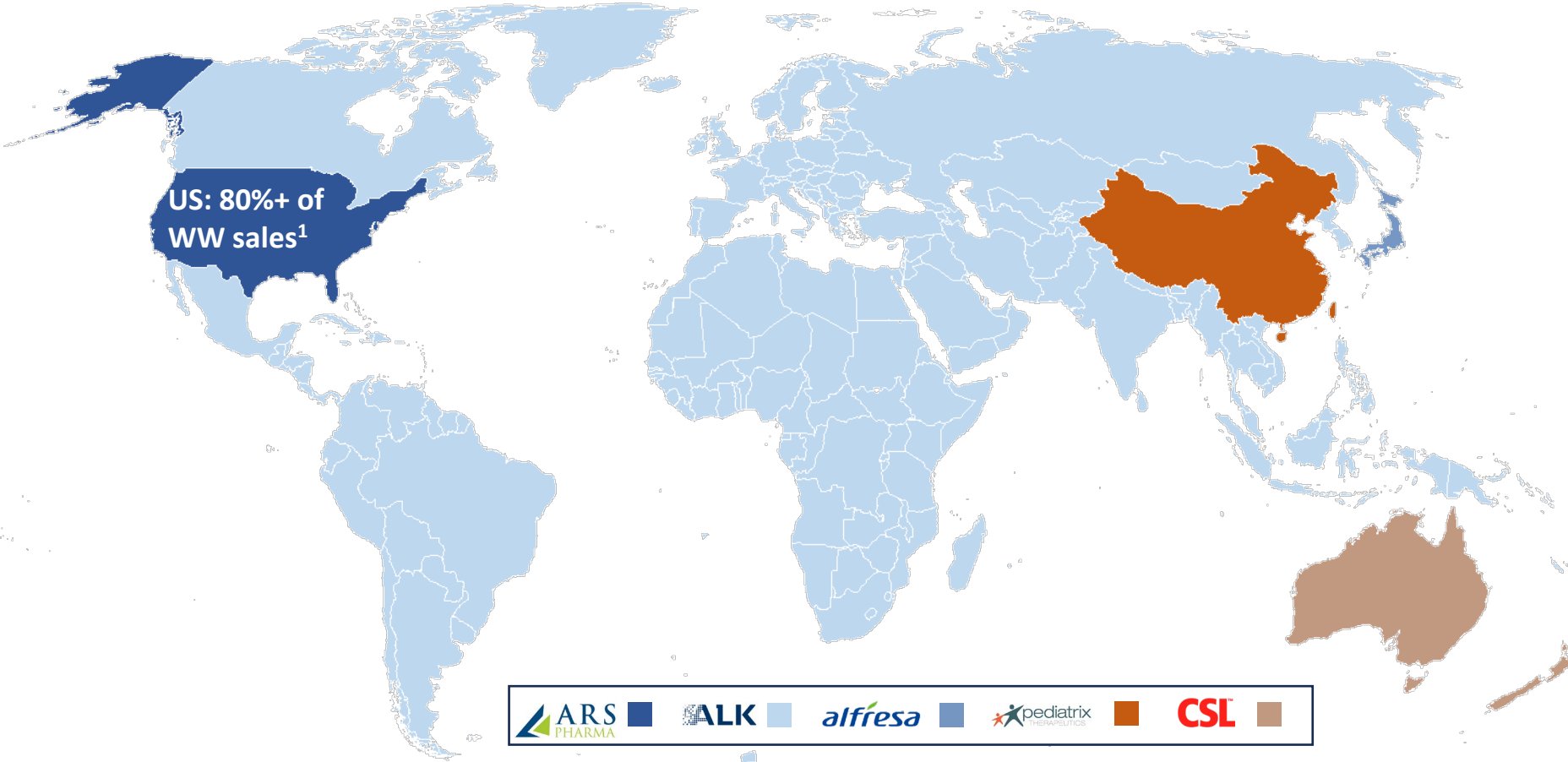
~\$7B+ potential
in expansion segment¹²

Not including increased units/patient as market research indicates

5 References: 1. Based on IQVIA prescription data available through 2023 (~5.2 million two-packs sold in 2023). 2. Gupta RS, et al. *Pediatrics*. 2011. 3. Gupta RS, et al. *Pediatrics* 2018. 4. McGowan EC, et al. *J Clin Allergy Immunol*. 2013. 5. Jackson KD, et al. *NCHS Data Brief*. 2013. 6. Black LI, et al. CDC National Center for Health Statistics Data Brief. 2019. 7. Gupta RS, et al. *JAMA Netw Open*. 2019. 8. Verrill L, et al. *Allergy Asthma Pro*. 2015. 9. Biló BM, et al. *Current Opin Allergy Clin Immunol*. 2008. 10. IQVIA Claims Data, 2023. 11. Based on calculations from Warren CM, et al. *Ann Allergy Asthma Immunol*. 2018., Rooney E, et al. Poster Presentation at ACAAI 2022 (Louisville, KY). Brooks C, et al. *Ann Allergy Asthma Immunol*. 2017., El Turki A, et al. *Emerg Med J*. 2017., Asthma and Allergy Foundation of American Patient Survey Report 2019, and Mehta GD, et al. *Expert Rev Clin Immunol*. 2023. 12. Estimated based on 13.5M diagnosed, but not prescribed epinephrine Rx

Ex-US partners enable ARS to focus exclusively on the United States

ARS has received FDA/EC approval and filed in UK, Canada, China, and AUS/NZ within 6 months of FDA approval; these regions represent 98% of global epinephrine autoinjector sales¹



- Strong ex-US licensing partnering strategy with \$570M in upfront & milestones in addition to attractive royalty streams on net sales
- Projected ~\$425M USD *neffy* annual peak sales in ALK region for anaphylaxis only (excluding US, China, Japan, AUS/NZ)²

Commercialization Progress



neffy Strategic Objectives for Commercialization

Q4 2024

Early to mid 2025

Mid to late 2025

✓ Launch of 2 mg *neffy*
within 9 weeks of FDA approval



(Sept 23, 2024 launch)



EDUCATE PRESCRIBERS

Drive adoption within specialty and high prescribers that have a long history of using injection



FACILITATE ACCESS

Obtain 60%, growing to 80%+ commercial coverage of *neffy* with a total gross to net yield of ~50%



ACTIVATE PATIENTS

Accelerated DTC campaign prior to end of school year to increase awareness and motivate patients and caregivers to seek *neffy*

REACH MORE PRESCRIBERS

Option to expand CME, direct HCP marketing and sales force to drive prescriber uptake

neffy: Delivering on Expectations



\$7.1 million

in preliminary net product sales

Thirteen weeks post launch
(ending Dec. 31, 2024)



\$4.1 million

in consensus net product sales

Analyst estimates for FY2024¹

\$3.4 million

Internal forecast net product
sales (budgeted)

Objective Insights for FY2024



Strong demand to learn about *neffy* among HCPs targeted to date by ARS efforts

Approximately 50% of the ~4,000 initial priority targets of our sales organization have prescribed *neffy*

- Sales organization of 118 sales reps, virtual reps and area sales managers prioritized ~4,000 HCP targets representing 30% of all epinephrine Rx (deciles 8 to 10)
- Total reach of 12,500 targets representing 40-45% of epinephrine Rx from all HCPs
- >3,000 total HCPs have prescribed *neffy* to patients with ~200+ new HCPs being added every week

1,750+ HCPs and growing have enrolled in the *neffy* Experience Program (rescue therapy at allergy challenge clinics)

- Enable real-world experience with *neffy*
- Target allergist offices that conduct in-office food challenge testing
- HCPs will have the ability to gain first-hand knowledge of *neffy's* effectiveness
- Patients undergoing allergy challenge will also be exposed to *neffy*

67%+ of *neffy* Experience HCPs have prescribed *neffy*





On track to ensuring broad *neffy* access for patients

Payers recognize the value of *neffy*

List price for two doses of *neffy* is \$710

Co-pay buydown to \$25 for commercial patients

- **Express Scripts** (2nd largest PBM)¹ added *neffy* to its commercial national formularies as of late November 2024 (**Tier 2 Preferred**) – 9 weeks after launch
- **Other key PBMs and insurers:** encouraging discussions with additional formulary additions expected in Q1 2025

Contract discussions with key payers on track for commercial coverage targets

- **>60%+ coverage anticipated by 6 months** post-launch (end of Q1 2025)
- **>80%+ coverage anticipated by 12 months** post-launch (end of Q3 2025)
- **>50% total gross to net yield to ARS preserved in agreements to date**

Plans to increase awareness & motivation to seek and prescribe *neffy* as access expands in 2025

Consumer Marketing Activities

Branded *neffy* DTC Campaign starting in Q2 2025 with celebrity spokesperson later in 2025



HCP Marketing Activities

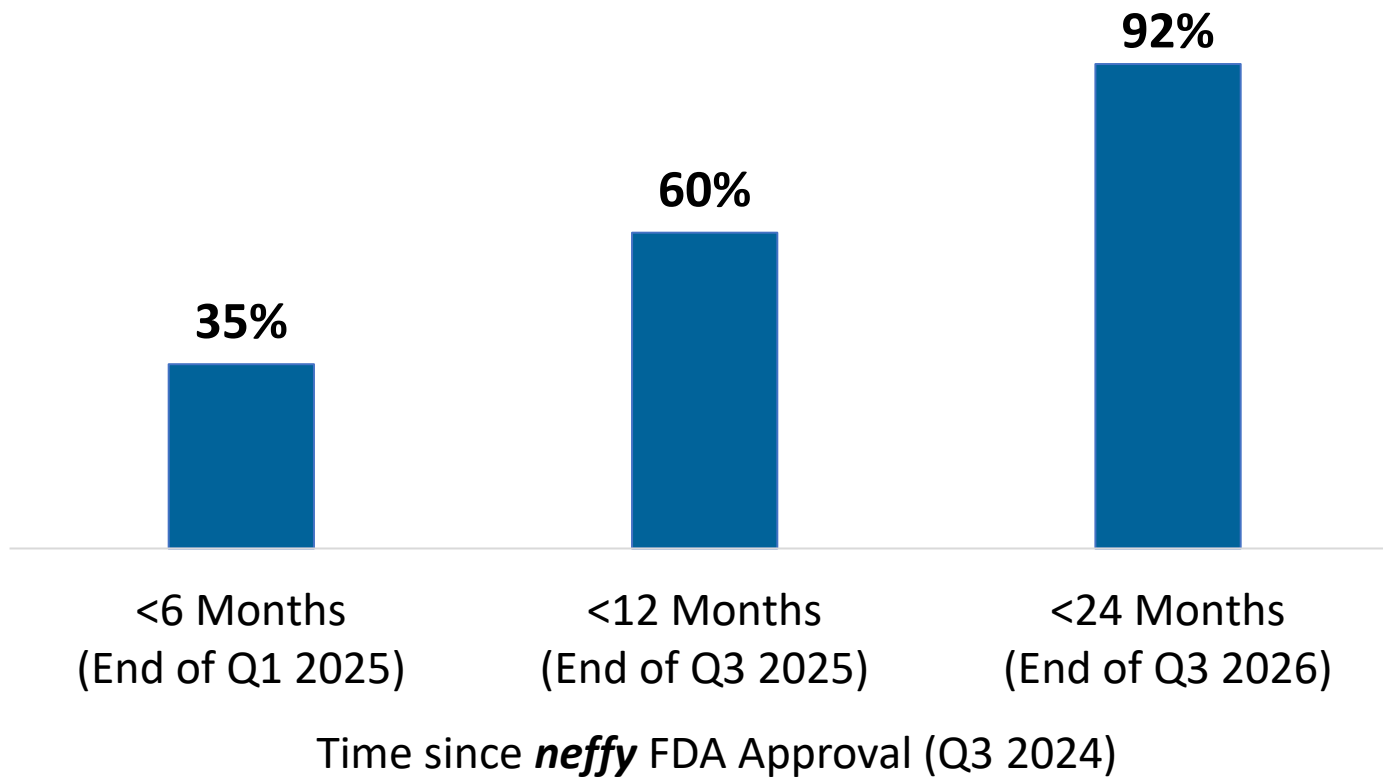
Well-balanced marketing plan active since launch, with relative return on investment (ROI) of *neffy* marketing mix being measured in 2025

- Expand Direct **HCP Marketing**, **CME programs**, **Conference Participation**, high impact **publications** on *neffy* clinical data and potential to **expand sales organization to ~200** depending on ROI assessment late 2025/early 2026
- Expanded sales footprint expected to increase direct epinephrine Rx coverage to 60-65% from 40-45%, **with an estimated 80%+ Rx reach** including non-personal promotional efforts to HCPs
- **Marketing activity expansion is not expected to impact guidance of at least three years of operating runway** based on cash on hand

Targeted Healthcare Providers Indicate Significant Uptake in 2025

December 2024 Survey¹, Sample = 150 HCPs from our 12,500 targets ~ 40-45% of epi Rx

% of target prescribers for whom *neffy* becomes the treatment of choice



Top 3 *neffy* barriers to becoming the treatment of choice today

1. Cost & Coverage (~37%)
 - Expected to be addressed by commercial coverage goal of 80% by Q3 '25 resulting in competitive co-pay versus generics EAls (\$25 vs. \$40)
2. Clinical Experience (~33%)
 - Expected to be addressed by time in market and accelerated by *neffy* Experience, conferences, speaker programs, CME and peer-reviewed publications
3. None (~13%)

Treatment of acute flares in chronic spontaneous urticaria patients on antihistamines represents blockbuster opportunity



~2M diagnosed chronic urticaria patients based on 12 month US prevalence of 0.78%¹



~1M US chronic urticaria patients reported to be treated with Rx medication¹

~8-9 HCP visits per year¹

~4-5 ER visits per year^{1,2}

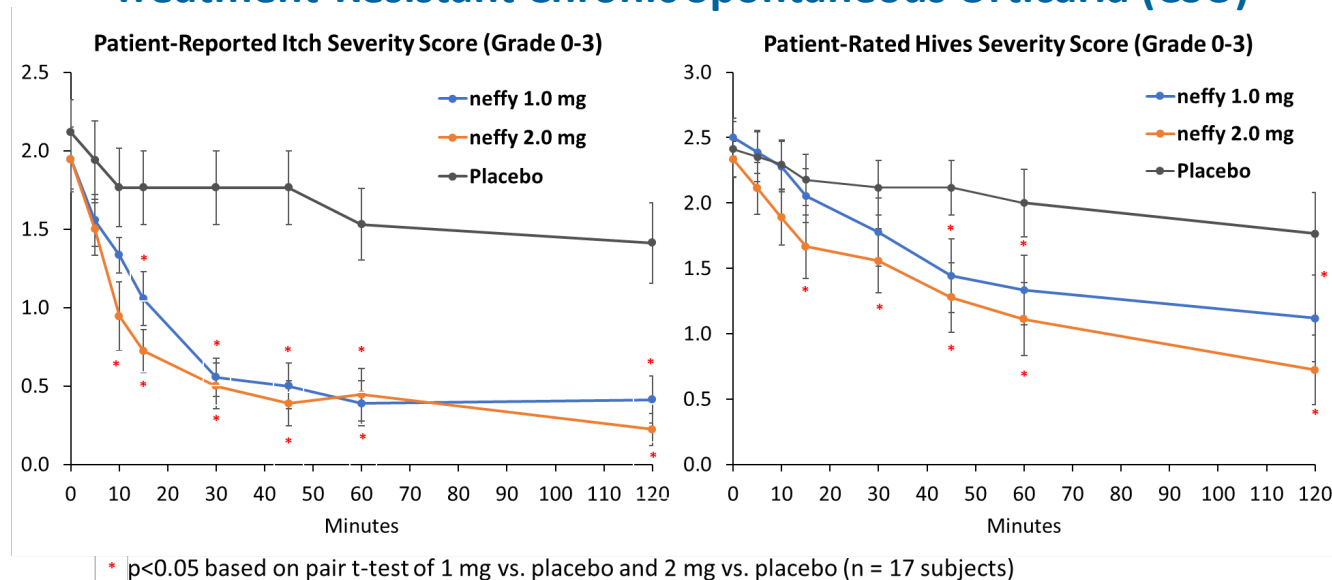
~50% with angioedema³

x **\$710** WAC/Rx

x **~50%** GTN Yield

= **\$2-3B+ peak net sales potential⁴**

neffy Shows Robust and Rapid Clinical Responses in Treatment-Resistant Chronic Spontaneous Urticaria (CSU)

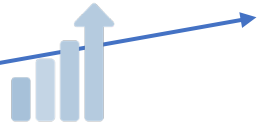


neffy may provide episodic relief of acute flares in CSU patients who are stable on chronic antihistamines

(Phase 2b clinical study to initiate in Q1 2025)

Potential to improve quality of life without escalating to chronic use of costly systemic biologics with potentially more side effects or having to visit ER/hospital

A Path to Blockbuster Potential for *neffy*



2 mg launch
(30 kg+)



Q4 2024

1 mg launch
(15-30 kg)



2025



2026

A Strong Foundation

- Sales force targeting higher decile priority HCPs
- *neffy* experience and patient success stories creating positive feedback loop
- Payers recognizing value of *neffy* (e.g. Express Scripts)

Accelerated Impact

- Broad commercial coverage with 80%+ targeted by end of Q3 '25
- Accelerated activation of consumer awareness with branded DTC incl. celebrity
- Expand breadth and depth of Rx'ing, and targeting lower decile HCPs with sales force and CME

Intensifying Growth

- Continued investment into consumer demand and seamless patient acquisition experience
- Steady-state total GTN in the ~50% range
- Potential initiation of pivotal trial for treatment of acute flares in CSU patients on antihistamines

Multi-blockbuster peak sales potential

driven by initial \$3B segment, ~\$7B expansion segment and ~\$2-3B+ CSU indication



Appendix



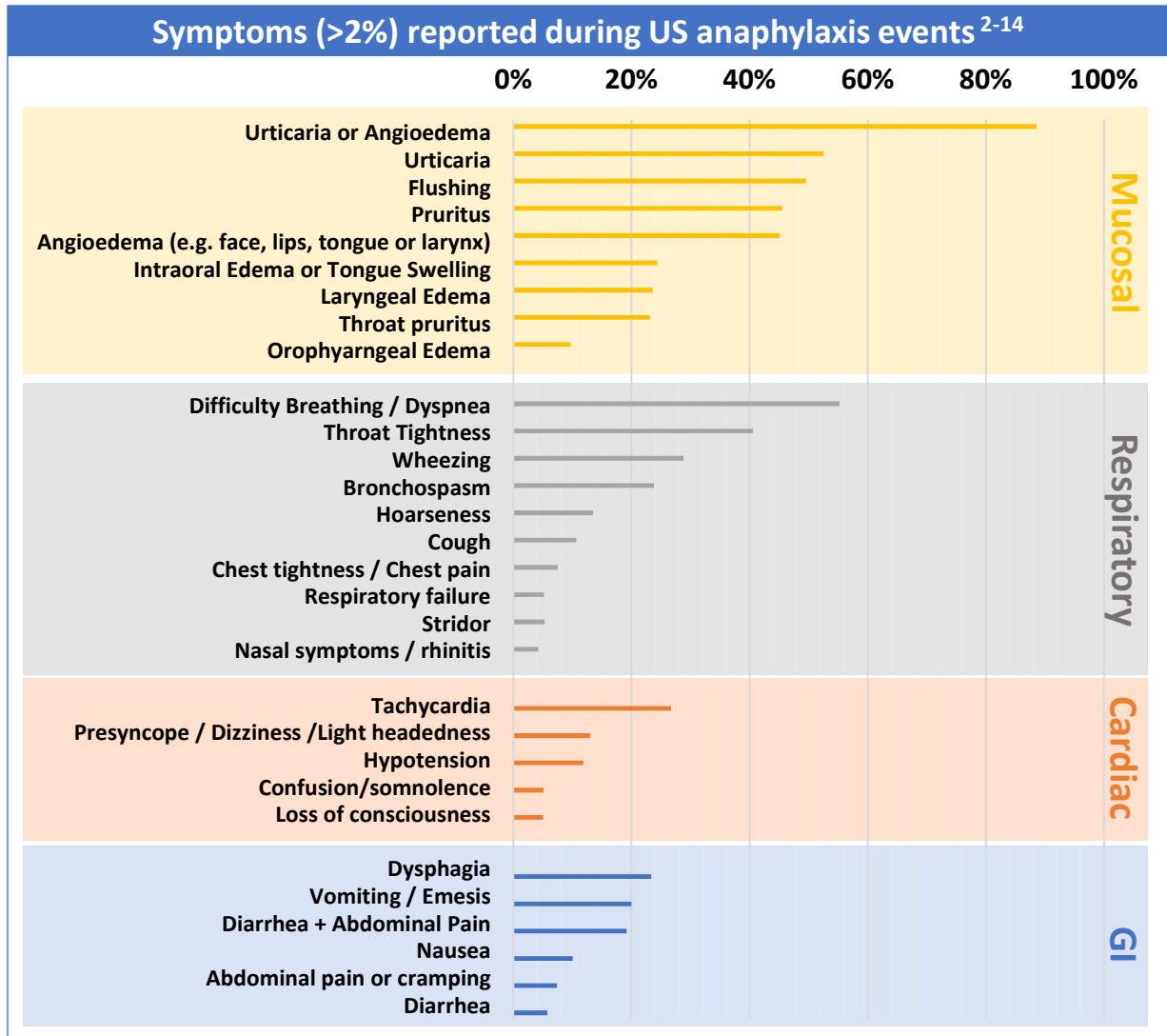
Anaphylaxis is Accompanied by Many Frequent Symptoms

Common Anaphylaxis Symptoms Include:

>85% urticaria (hives, erythema) or angioedema (swelling of the face, lips, tongue or larynx)

>55% difficult breathing

>40% gastrointestinal (eg, vomiting, nausea)

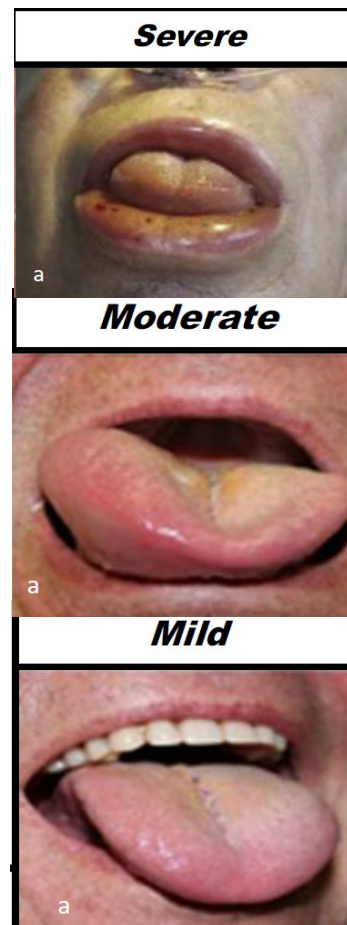


Presentation of anaphylaxis is unpredictable in terms of rate of progression, observed symptoms and symptom severity - a novel product must be effective for the full spectrum of anaphylaxis

“Signs and symptoms of anaphylaxis are unpredictable and may vary from patient to patient and from one reaction to another.”²

Severity grades**	
5	ANY Severe: <i>Cardiovascular, Neurologic, Respiratory</i>
4	ANY Moderate: <i>Cardiovascular, Neurologic, Respiratory</i> OR Severe: <i>Mucosal/angioedema</i>
3	ANY Mild: <i>Cardiovascular, Neurologic, Respiratory</i>
2	2 or more Mild, ANY Moderate: <i>Skin, Gastrointestinal, Mucosal/angioedema</i>
1	ANY Mild: <i>Skin, Gastrointestinal, Mucosal/angioedema</i>

Mucosal/Angioedema Visual Presentation
Severity of Mucosal/Angioedema Involvement¹



Like injection, any novel epinephrine product must be delivered safely and effectively irrespective of the severity across the full continuum of anaphylaxis including symptoms such as angioedema, loss of consciousness (passerby doses) or during vomiting

Registrational studies demonstrate comparability on both PD surrogates for efficacy and PK with *neffy*

PD and PK Data

- 2 mg *neffy* met all clinical endpoints
- PD surrogates for efficacy comparable to approved products (SBP/HR \geq approved injection products)
- Rapid and significant response on PD surrogates for efficacy observed even 1 minute after dosing
- PK bracketed by approved products (exposures \geq IM/SC for efficacy, $<$ EpiPen for safety)
- Repeat doses (including during rhinitis) within range of approved injection products



Safety Data

- Adverse events generally mild in nature with no meaningful nasal irritation or pain up to 4 mg dose
- Most common adverse events ($>5\%$) with single doses of *neffy* were mild nasal discomfort (9.7%) and mild headache (6%), with no correlation of nasal discomfort to pain or irritation
 - Mean VAS pain scores between 5 to 8 out of 100
 - No irritation based on formal assessment
- No serious adverse events in any clinical study
- No risk of needle-related injuries or blood vessel injections with *neffy*

Differentiated FDA label for *neffy* compared to injection may reduce hesitancy to dose and lead to broader adoption

Label differentiation	Injection ¹	<i>neffy</i>
1. Emergency medical assistance after dosing not automatic, consistent with new AAAAI treatment guidelines	<p>“In conjunction with the administration of epinephrine, the <u>patient should seek</u> immediate medical or hospital care.”</p>	<p>“<u>Advise patients when to seek</u> emergency medical assistance for close monitoring of the anaphylactic episode, and in the event further treatment is required.”</p>
2. Removes all injection-related warnings and precautions, which may reduce anxiety and hesitation to dose	<ul style="list-style-type: none"> • Accidental IV injection may result in cerebral hemorrhage • Accidental injection into digits, hands or feet may result in loss of blood flow to the affected area, and immediate visit to emergency room • Needle-related injury due to lacerations, bent needle and embedded needles • Serious injection site infections including necrotizing fasciitis and myonecrosis 	<p>No injection-related warnings or precautions</p>
3. Wider temperature stability, which may facilitate carriage and continuous readiness	<p>Excursions permitted from 59°F to 86°F</p>	<p>Excursions permitted from 5°F to 122°F</p>

U.S. prescribing information for *neffy*: robust response on PD surrogate markers for efficacy in normal and NAC¹ nasal conditions

Figure 1: Median Pulse Rate (PR) and Systolic Blood Pressure (SBP) Change from Baseline Following One Dose of Epinephrine in Healthy Subjects [Study 1]

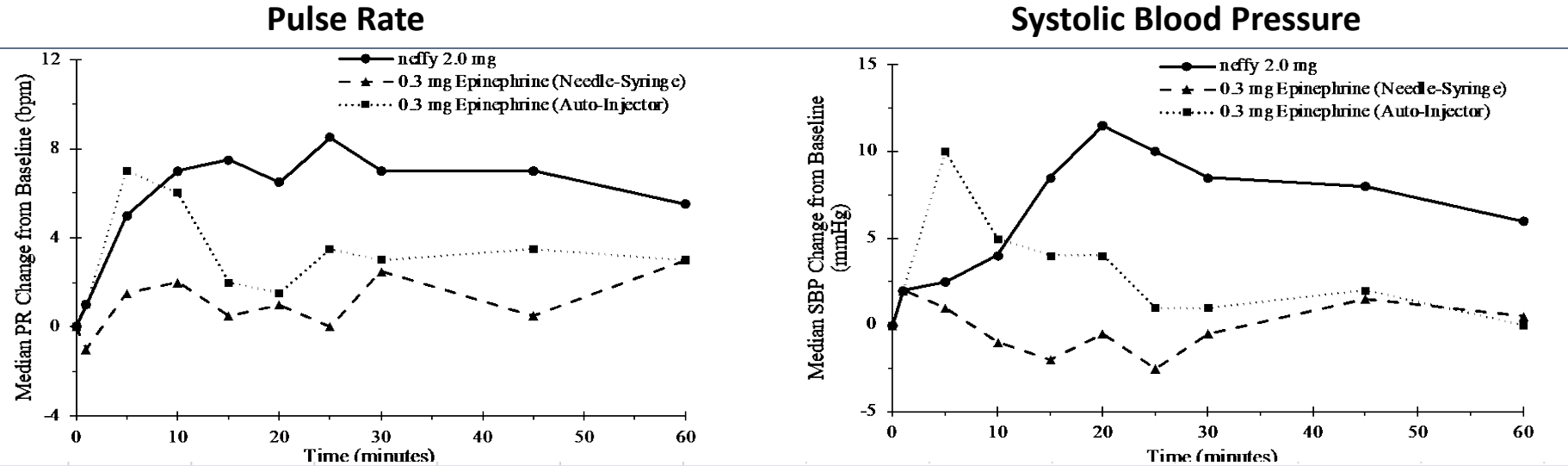
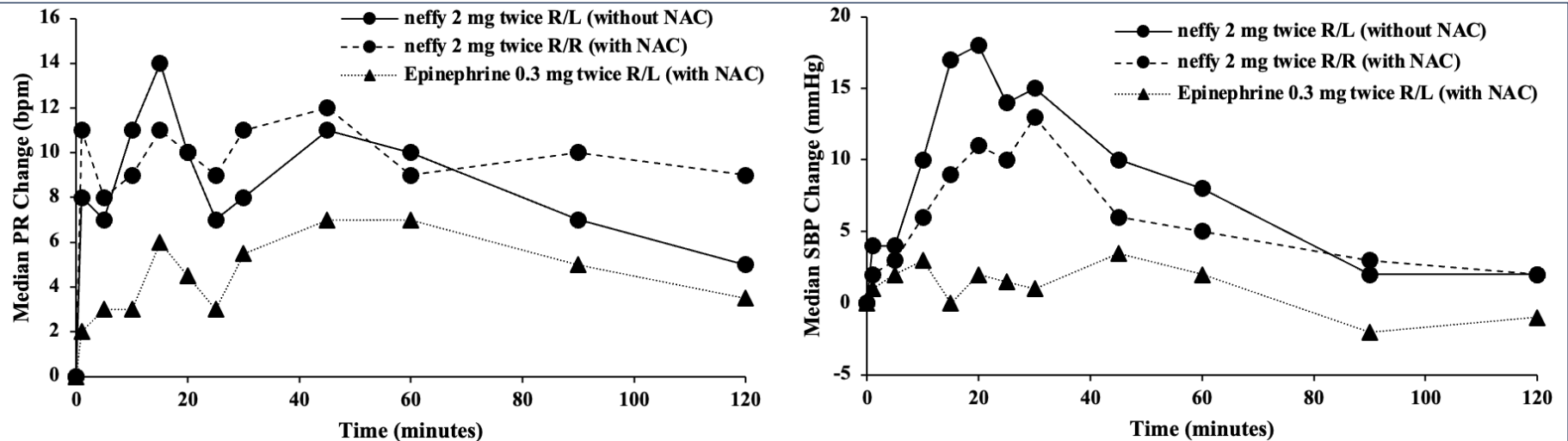
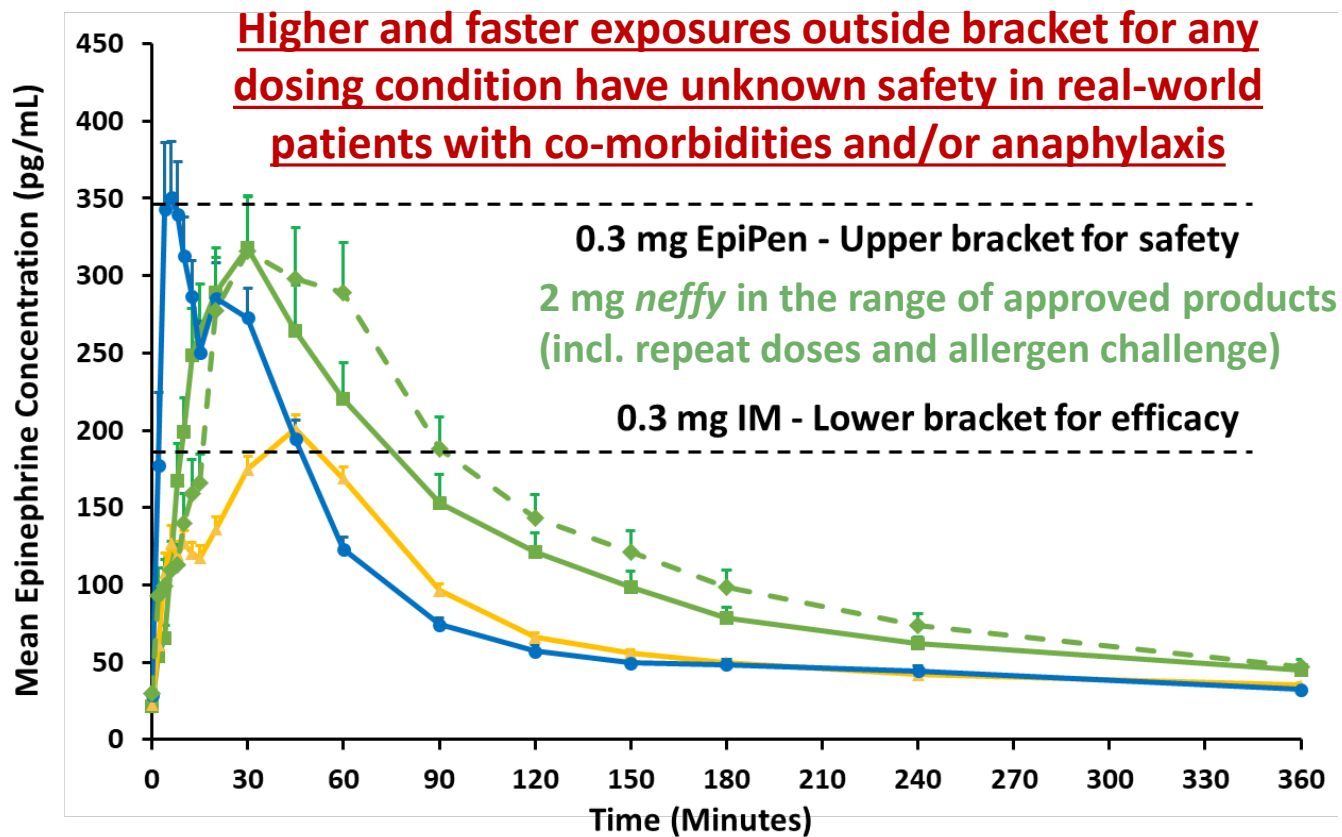


Figure 2: Median Change from Baseline for Systolic Blood Pressure (SBP) and Pulse Rate (PR) Following Two Doses of Epinephrine Administered 10 Minutes Apart in Right and Left Nares (R/L) or Right and Right Nares (R/R) in Subjects with Allergic Rhinitis with and without Nasal Allergen Challenge (NAC) [Study 4]



neffy exposures for all dosing conditions are in the range of approved injection exposures that are considered safe enough for use in anaphylaxis given the 35+ years of real-world safety

No difference in efficacy for PK > 0.3 mg IM (~90% resolution with single dose for all injectables⁴), but possible increased risk of side effects, especially if time to peak concentration is faster than autoinjector (e.g. IV bolus)



Increased risk of side effects ↑

8 mg by injection = maximum tolerated dose¹
 4 mg by injection = minimally lethal dose¹

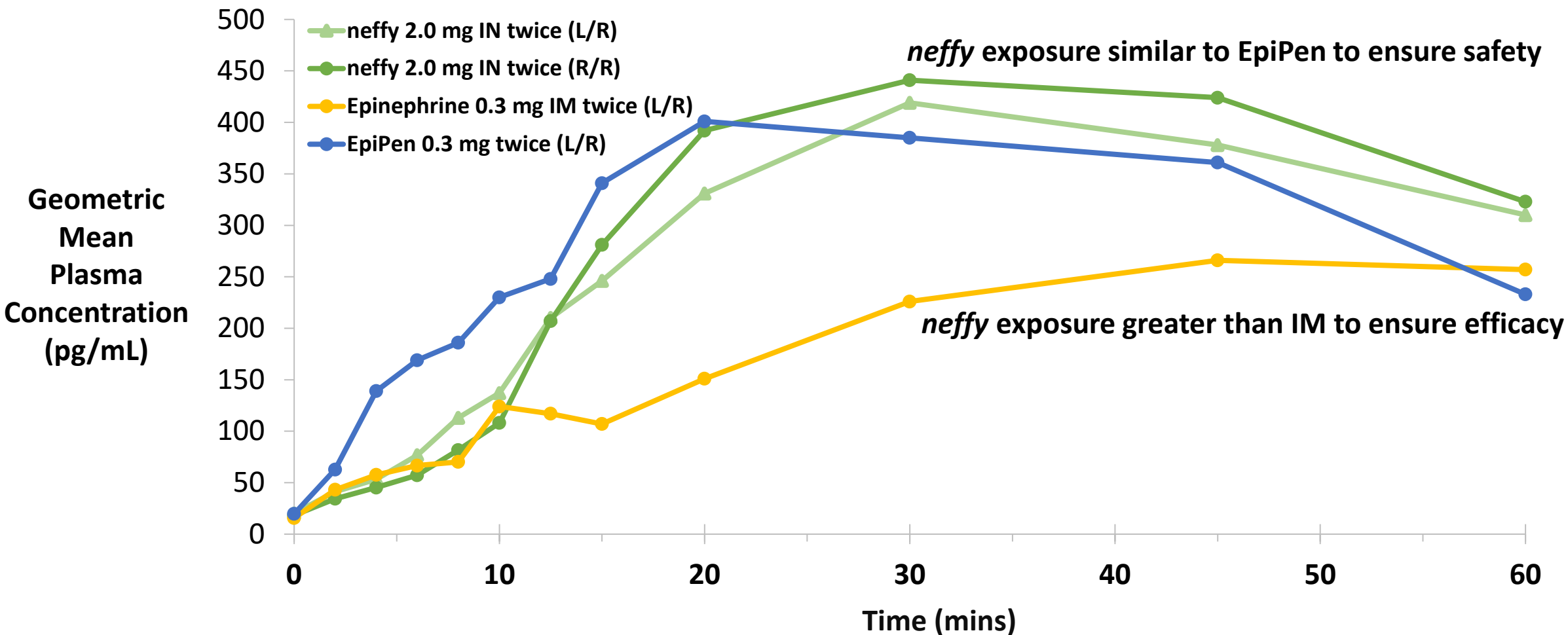
**0.3 mg EpiPen – risk of cardiotoxicity in healthy subject with accidental IV bolus (t_{max} = 4 min)
 103 mmHg increase in systolic blood pressure²**

0.3 mg IM – higher risk of cardiotoxicity in older patients with more comorbidities³

Results: Among 338 included patients, 16 (4.7%; 95%CI: 2.8–7.6%) experienced cardiotoxicity. Cardiotoxic events included eight (2.4%) ischemic electrocardiogram changes, six (1.8%) episodes of elevated troponin, five (1.5%) atrial arrhythmias, one (0.3%) ventricular arrhythmia, and one (0.3%) depressed ejection fraction. Patients with cardiotoxicity were significantly older, had more comorbidities, and were more likely to have received multiple doses of epinephrine or an epinephrine infusion compared with a single IM dose of epinephrine.

Exposures of repeat doses of *neffy* in healthy subjects are also in the range of FDA approved epinephrine injection products

Repeat-dosing (10 min apart) results in healthy subjects



neffy has been designed to uniquely treat anaphylaxis effectively and safely in a portable and needle-free format



Safety

Effectiveness

Easy to Use

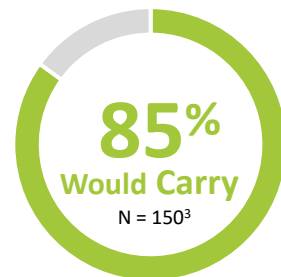
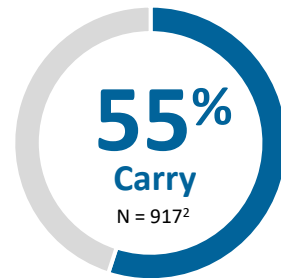
Consideration for Use in Anaphylaxis	neffy features
<p>Are exposures in the range of injection products already established to be safe through real-world historical use even in patients with co-morbidities, anaphylaxis or cardiovascular disease, and for all relevant dosing conditions?</p>	<p>neffy exposures are within range of injection products including repeat dosing and nasal allergen challenge, with variability similar to or less than injection products, which minimizes chance of outliers that are either too high or too low</p>
<p>Is the epinephrine dose low to minimize risk of overdose given established therapeutic window of epinephrine, especially in older patients or those with co-morbidities?</p>	<p>neffy achieves injection-like PK with a high bioavailability low 2 mg dose, within the known therapeutic window of epinephrine</p>
<p>Is the absorption profile or ability to use the product negatively impacted by co-occurring anaphylaxis symptoms, or disease severity, including GI symptoms (e.g. vomiting), or mucosal changes (tongue swelling, angioedema), that can alter absorption or even obstruct ability to dose?</p>	<p>neffy labelled for effective and safe use across the entire continuum of anaphylaxis disease, irrespective of severity or stage of symptoms, just like the epinephrine injection products that can treat even late-stage disease</p>
<p>Is there risk of adverse events that could mimic anaphylaxis and prevent effective treatment such as GI symptoms or erythema?</p>	<p>neffy has minimal to no GI symptoms or erythema that could confound effective treatment of the disease by a patient, caregiver or HCP</p>
<p>Will patients, especially children, be deterred from use due to side effects or irritation from the product?</p>	<p>neffy shows no meaningful pain or irritation as measured by formal scales that could deter use</p>
<p>Is the product reliable at delivering epinephrine in an emergency?</p>	<p>neffy uses a 99.999% reliable device that can be administered by caregivers by reading the instructions without any training; the device has even been used to treat unconscious patients (e.g. NARCAN)</p>

neffy: Innovative Treatment to Overcome Known Challenges with Needle-Injectors for SAR Patients

Benefits of needle-free alternative to address major unmet needs

- More allergy patients and caregivers are likely to carry *neffy* compared to current needle-bearing options³
- Patients are likely to dose *neffy* more rapidly with a needle-free device¹

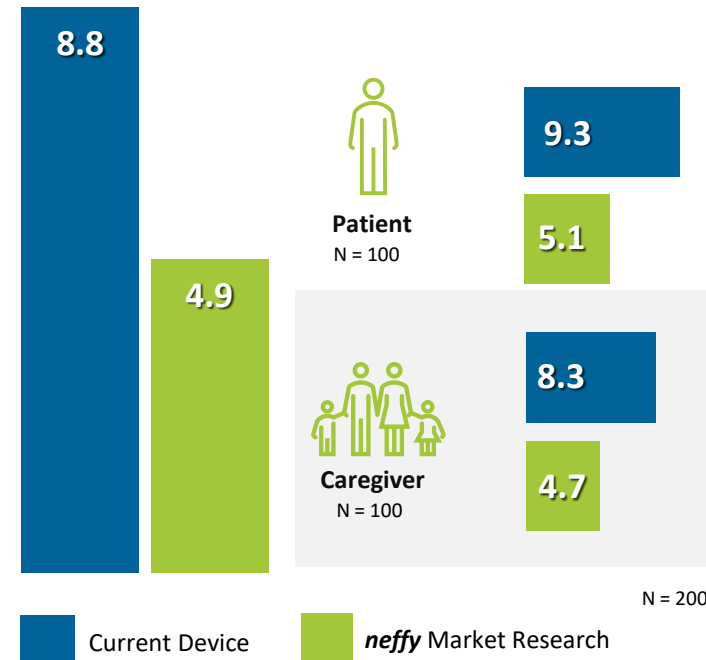
 % of Time Carrying at least One Epinephrine Device^{2,3}



 45% REDUCTION IN TIME TO USE

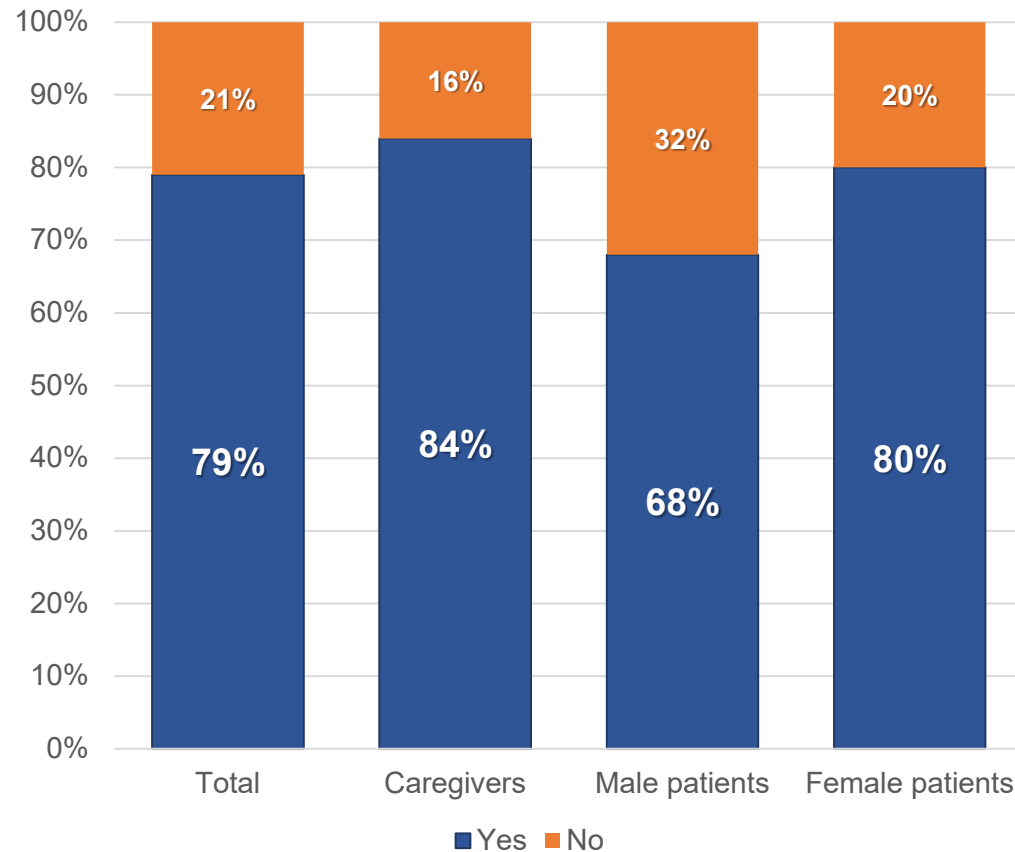


Average Time (minutes) from Symptom Start to Device Use¹

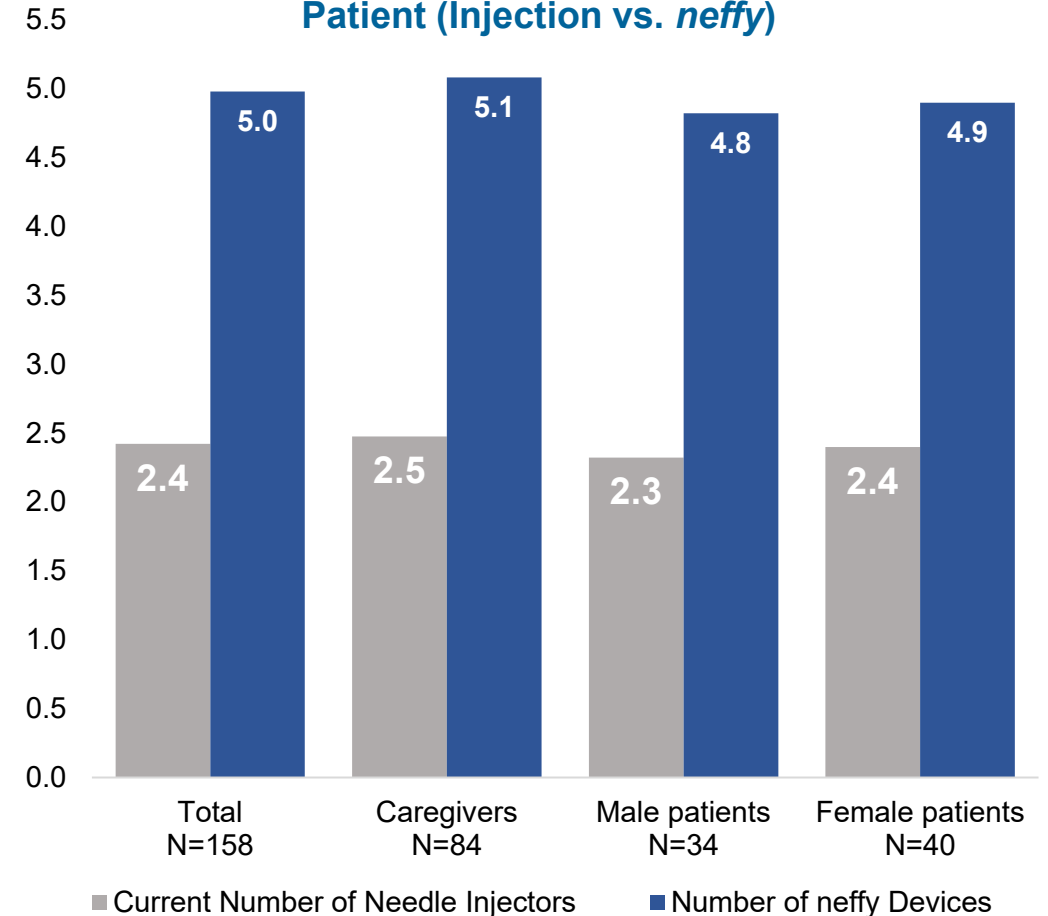


Nearly 80% of respondents indicate they would acquire additional *neffy* when available, averaging a potential of 2.6 additional devices more than they have now

% of Respondents that Would Acquire Additional *neffy* Devices (n = 200)



Average Number of Devices Acquired per Patient (Injection vs. *neffy*)



neffy profile including 30-month shelf-life may increase market opportunity within current active Rx patient segment

	<i>neffy</i>	needle-injectors
Shelf-life (up to)	30 months	~18 to 24 months (average of 22-23)
Time between refills	18 months (patient market research) ¹	15 months (IQVIA longitudinal data) ²
Preference share	~15 absolute % point increase in patient preference share vs. 18-month shelf-life ¹	
Cartons* per refill cycle	Greater than 2 cartons/cycle ¹	1.2 to 1.4 cartons/cycle ²
Likelihood to use device	72% would use <i>neffy</i> instead of OTC antihistamine prior to autoinjector ³ 45% reduction in time to use vs. autoinjector ⁴	

*One carton contains two devices

Anticipate strong volume growth among today's active Rx patient segment, in addition to lapsed/non-filler and untreated patient segments