



**SAMSUNG BIOEPIS**

Biosimilar Market Report

*2<sup>nd</sup> Edition, Q3 2023*

**SAMSUNG** BIOEPIS

# I FOREWORD

Dear Readers,

So far in 2023, we have seen the start of biosimilars being launched within pharmacy benefits. Moving forward, we expect there to be eight additional brands entering the pharmacy benefit biosimilar market with each undergoing analysis for potential placement on specialty pharmacy formularies. This is the start of new beginning for biosimilars in the United States.

In this exciting time in the biosimilar industry, the Samsung Bioepis Biosimilar Market Report will provide an up-to-date perspective on the US biosimilar landscape for you each quarter.

In this second edition of the report, we have updated the most recent price trends of all molecules for biosimilar(s) that have launched.

Moving forward each Market Report will consist of comprehensive updates on pricing and market penetration for all marketed biosimilars in the US.



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**Thomas Newcomer**

Vice President  
Head of Market Access, Samsung Bioepis US



# | SAMSUNG BIOEPIS

## Our mission

Samsung Bioepis is a biopharmaceutical company dedicated to accelerating access to biologic medicines by bringing **high-quality, clinically proven biosimilars to patients** who need them

Our mission is reflected in our name, **bio-epis**; literally meaning life (“**bio**”) and science (“**episteme**”) in Greek

“

Unlocking the **future of healthcare**  
by breakthrough **innovation and science**

”



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US Biosimilars Approval  
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Biosimilar Price

Medical Benefit

- Oncology
- Supportive Care
- Immunology & Ophthalmology

Pharmacy Benefit

- Immunology & Endocrinology

Biosimilar Market Dynamics

Correlation between  
biosimilar price  
& market adoption

Market Share & Price Trends

- Oncology
- Supportive Care
- Immunology
- Endocrinology
- Ophthalmology

Reference

# FDA Approval and Launch Status of US Biosimilars

✦ As of Jun 2023, the FDA has approved a total of 41 biosimilars across 11 unique biological molecules. Of the 41 approvals, 30 biosimilars have been launched in the US market.

- In January, Amjevita became the first Humira (adalimumab) biosimilar to hit the US market. Several additional biosimilar competitors are expected to launch in July into what is likely to be the largest biosimilar market in the US.
- In Q2, one new biosimilar was approved in the US (Yuflyma for Humira) and two other previously approved products were launched. Vegzelma became the 4<sup>th</sup> biosimilar for Avastin and Fylnetra’s commercial launch represented the 5<sup>th</sup> competitor to Neulasta.

Cumulative  
Approvals

41

Figure 1. Biosimilars Approval and Launch Status in the US<sup>1\*</sup> (As of Jun 2023)

TA	Oncology			Supportive Care			Immunology			Endocrinology	Ophthalmology
Molecule	Trastuzumab	Bevacizumab	Rituximab	Filgrastim	Pegfilgrastim	Epoetin alfa	Infliximab	Adalimumab	Etanercept	Insulin Glargine	Ranibizumab
Reference Product	Herceptin Roche 1998	Avastin Roche 2004	Rituxan Genentech&Biogen 1997	Neupogen Amgen 1991	Neulasta Amgen 2002	Epogen/Procrit Amgen 1989	Remicade Janssen 1998	Humira AbbVie 2002	Enbrel Amgen 2003	Lantus Sanofi 2000	Lucentis Novartis 2006
Biosimilar	Ogivri Mylan 2017	Mvasi Amgen 2017	Truxima Celltrion&Teva 2018	Zarxio Sandoz 2015	Fulphila Mylan 2018	Retacrit Hospira&Pfizer 2018	Inflectra Celltrion&Pfizer 2016	Amjevita AbbVie 2016	Erelzi Sandoz 2016	Semglee Mylan 2021	Byooviz Samsung Bioepis & Biogen 2021
	Herzuma Celltrion&Teva 2018	Zirabev Pfizer 2019	Ruxience Pfizer 2019	Nivestym Hospira&Pfizer 2018	Udenyca Coherus 2018		Renflexis Samsung Bioepis & Organon 2017	Cyltezo Boehringer Ingelheim 2017	Eticovo Samsung Bioepis 2019	Rezvoglar Eli Lilly 2021	Cimerli Coherus 2022
	Ontruzant Samsung Bioepis & Organon 2019	Alymsys Amneal 2022	Riabni Amgen 2020	Releuko Amneal&Kashiv 2022	Ziextenzo Sandoz 2019		Avsola Amgen 2019	Hyrimoz Sandoz 2018			
	Trazimera Pfizer 2019	Vegzelma Celltrion 2022			Nyvepria Hospira&Pfizer 2020		Ixifi Pfizer 2017	Hadlima Samsung Bioepis & Organon 2019			
	Kanjinti Amgen 2019				Stimufend Fresenius Kabi 2022			Abrilada Pfizer 2019			
					Fylnetra Amneal&Kashiv 2022			Hulio Mylan 2020			
								Yusimry Coherus 2021			
								Idacio Fresenius Kabi 2022			
								Yuflyma Celltrion 2023			

■ Launched    ■ Not launched    ■ Updated brand vs. last report

FDA: Food and Drug Administration; TA: Therapeutic area  
\*Trade marks are not described to all brands

US Biosimilars Approval & Launch Status

Biosimilar Price

Medical Benefit

- Oncology
- Supportive Care
- Immunology & Ophthalmology

Pharmacy Benefit

- Immunology & Endocrinology

Biosimilar Market Dynamics

Correlation between biosimilar price & market adoption

Market Share & Price Trends

- Oncology
- Supportive Care
- Immunology
- Endocrinology
- Ophthalmology

Reference

Figure 1-1. Biosimilars Approval and Launch Status in the US<sup>1\*</sup> (As of Jun 2023, with Suffix)

TA	Oncology			Supportive Care			Immunology			Endocrinology	Ophthalmology
Molecule	Trastuzumab	Bevacizumab	Rituximab	Filgrastim	Pegfilgrastim	Epoetin alfa	Infliximab	Adalimumab	Etanercept	Insulin Glargine	Ranibizumab
Reference Product	Herceptin (trastuzumab) Roche 1998	Avastin (bevacizumab) Roche 2004	Rituxan (rituximab) Genentech&Biogen 1997	Neupogen (Filgrastim) Amgen 1991	Neulasta (pegfilgrastim) Amgen 2002	Epogen (epoetin alfa) Amgen 1898	Remicade (infliximab) Janssen 1998	Humira (adalimumab) AbbvVie 2002	Enbrel (etanercept) Amgen 2003	Lantus (insulin glargine) Sanofi 2000	Lucentis (ranibizumab) Novartis 2006
Biosimilar	Ogivri (trastuzumab-dkst) Mylan 2017	Mvasi (bevacizumab-awwb) Amgen 2017	Truxima (rituximab-abbs) Celltrion&Teva 2018	Zarxio (filgrastim-sndz) Sandoz 2015	Fulphila (pegfilgrastim-jmdb) Mylan 2018	Retacrit (epoetin alfa-epbx ) Hospira&Pfizer 2018	Inflectra (infliximab-dyyb) Celltrion&Pfizer 2016	Amjevita (adalimumab-atto) Amgen 2016	Erelzi (etanercept-szsz) Sandoz 2016	Semglee (insulin glargine-yfgn) Mylan 2021	Byooviz (Ranibizumab-nuna) Samsung Bioepis 2021
	Herzuma (trastuzumab-pkrb) Celltrion&Teva 2018	Zirabev (bevacizumab-bvzr) Pfizer 2019	Ruxience (rituximab-pvvr) Pfizer 2019	Nivestym (filgrastim-aafi) Hospira&Pfizer 2018	Udenyca (pegfilgrastim-cbqv) Coherus 2018		Renflexis (infliximab-abda) Samsung Bioepis&Organon 2017	Cyltezo (adalimumab-adbm) Boehringer Ingelheim 2017	Eticovo (etanercept-ykro) Samsung Bioepis 2019	Rezvoglar (insulin glargine-aglr) Eli Lilly 2021	Cimerli (Ranibizumab-eqrn) Coherus 2022
	Ontruzant (trastuzumab-dttb) Samsung Bioepis&Organon 2019	Alymsys (bevacizumab-maly) Amneal 2022	Riabni (rituximab-arrx) Amgen 2020	Releuko (filgrstim-ayow) Amneal&Kashiv 2022	Ziextenzo (pegfilgrastim-bmez) Sandoz 2019		Avsola (infliximab-axxq) Amgen 2019	Hyrimoz (adalimumab-adaz) Sandoz 2018			
	Trazimera (trastuzumab-qyyp) Pfizer 2019	Vegzelma (Bevacizumab-adcd) Celltrion 2022			Nyvepria (pegfilgrastim-apgf) Hospira&Pfizer 2020		Ixifi (infliximab-qbtx) Pfizer 2017	Hadlima (adalimumab-bwwd) Samsung Bioepis&Organon 2019			
	Kanjinti (trastuzumab-anns) Amgen 2019				Stimufend (pegfilgrastim-fpgk) Fresenius Kabi 2022			Abrilada (adalimumab-afzb) Pfizer 2019			
					Fylnetra (pegfilgrastim-pbbk) Amneal&Kashiv 2022			Hulio (adalimumab-fkjp) Mylan 2020			
								Yusimry (adalimumab-aqvh) Coherus 2021			
								Idacio (adalimumab-aacf) Fresenius Kabi 2022			
								Yuflyma (adalimumab-aaty) Celltrion 2023			

Launched

Not launched

Updated brand vs. last report

FDA: Food and Drug Administration; TA: Therapeutic area  
\*Trade marks are not described to all brands

US Biosimilars Approval  
& Launch Status

Biosimilar Price

Medical Benefit

- Oncology
- Supportive Care
- Immunology & Ophthalmology

Pharmacy Benefit

- Immunology & Endocrinology

Biosimilar Market Dynamics

Correlation between  
biosimilar price  
& market adoption

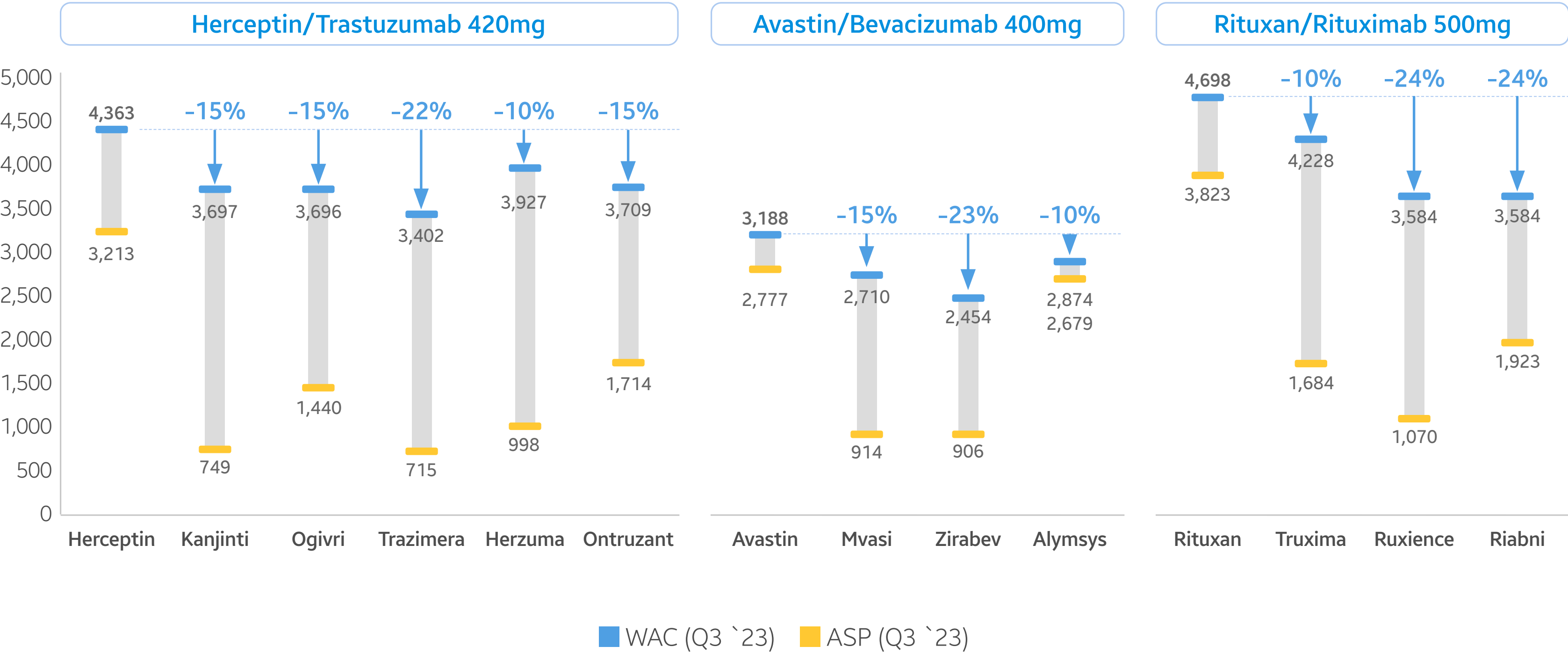
Market Share & Price Trends

- Oncology
- Supportive Care
- Immunology
- Endocrinology
- Ophthalmology

# Oncology WAC and ASP – Q3 2023

- ✦ Across oncological biosimilars, the stated WAC represents a modest discount (between 10-25%) compared to the reference product.
- ✦ Savings are seen in ASP where oncology biosimilars can save the health care system more than 70% compared to their reference products.

Figure 3. Q3 2023 WAC and ASP<sup>2,3</sup>



Products are listed in order of launch  
ASP: Average sales price; WAC: Wholesale acquisition cost

Biosimilar Price

Medical Benefit

- Oncology
- Supportive Care
- Immunology & Ophthalmology

Pharmacy Benefit

- Immunology & Endocrinology

Biosimilar Market Dynamics

Correlation between  
biosimilar price  
& market adoption

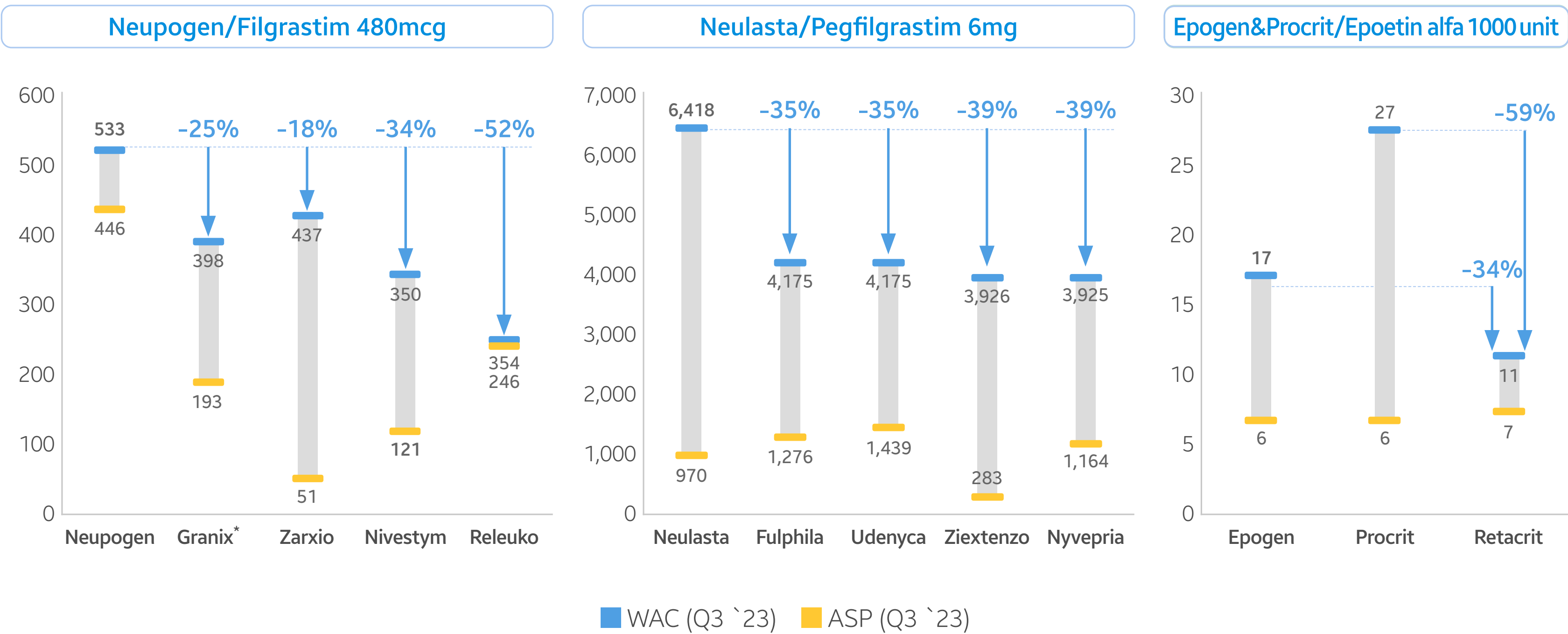
Market Share & Price Trends

- Oncology
- Supportive Care
- Immunology
- Endocrinology
- Ophthalmology

# Supportive Care WAC and ASP – Q3 2023

- ✦ In Pegfilgrastim and Epoetin alfa, the reference products match biosimilars' ASP in an effort to retain market share.
- ✦ However, Neupogen maintains higher ASP relative to biosimilars.

Figure 4. Q3 2023 WAC and ASP<sup>2,3</sup>



Products are listed in order of launch  
ASP: Average sales price; WAC: Wholesale acquisition cost  
\*Granix is not a biosimilar. It's approved under FDA, a new drug application pathway

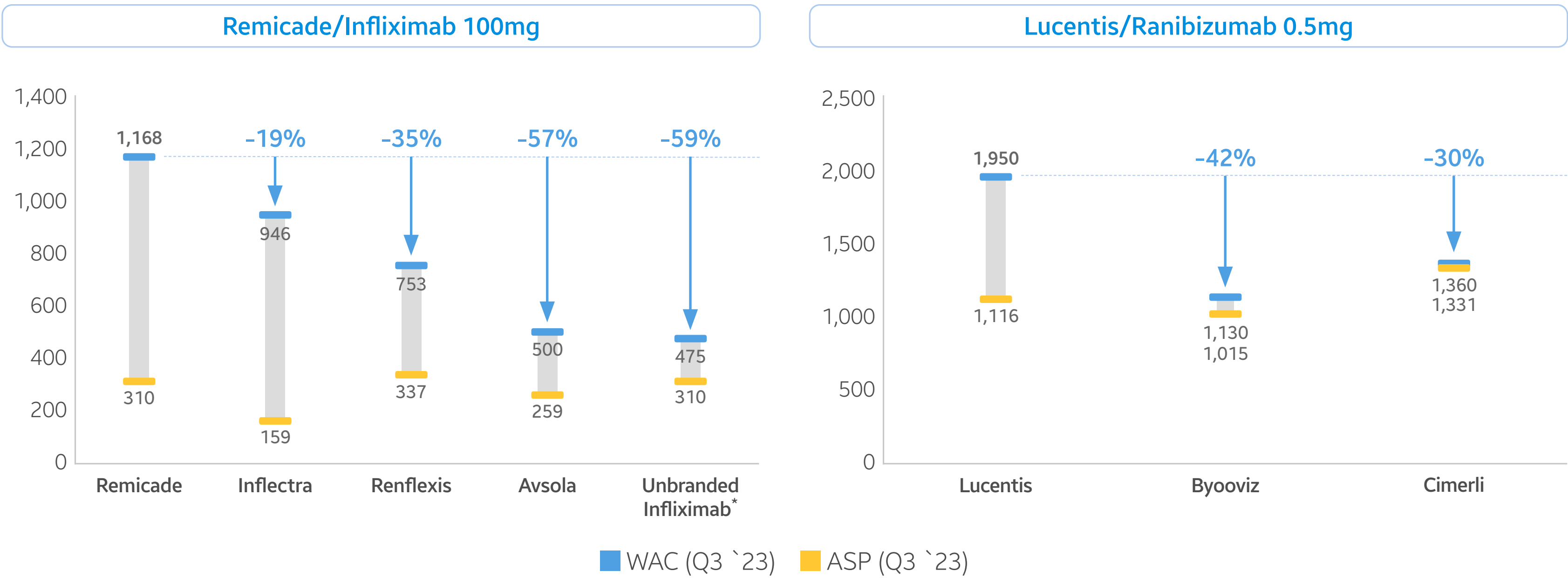


# Immunology & Ophthalmology

## WAC and ASP – Q3 2023

- ✦ Infliximab biosimilars launched with progressively lower WACs. The first biosimilar, Inflectra, only discounted 19% vs the reference product in Q3 2023, but subsequent launches of Avsola and unbranded infliximab had discounted WAC by over 50%.
- ✦ Recent ranibizumab biosimilar launches have already led to lower costs.

Figure 5. Q3 2023 WAC and ASP<sup>2,3</sup>



Products are listed in order of launch  
ASP: Average sales price; WAC: Wholesale acquisition cost  
\*Unbranded Infliximab is Remicade without the brand name

Biosimilar Price

Medical Benefit

- Oncology
- Supportive Care
- Immunology & Ophthalmology

Pharmacy Benefit

- Immunology & Endocrinology

Biosimilar Market Dynamics

Correlation between  
biosimilar price  
& market adoption

Market Share & Price Trends

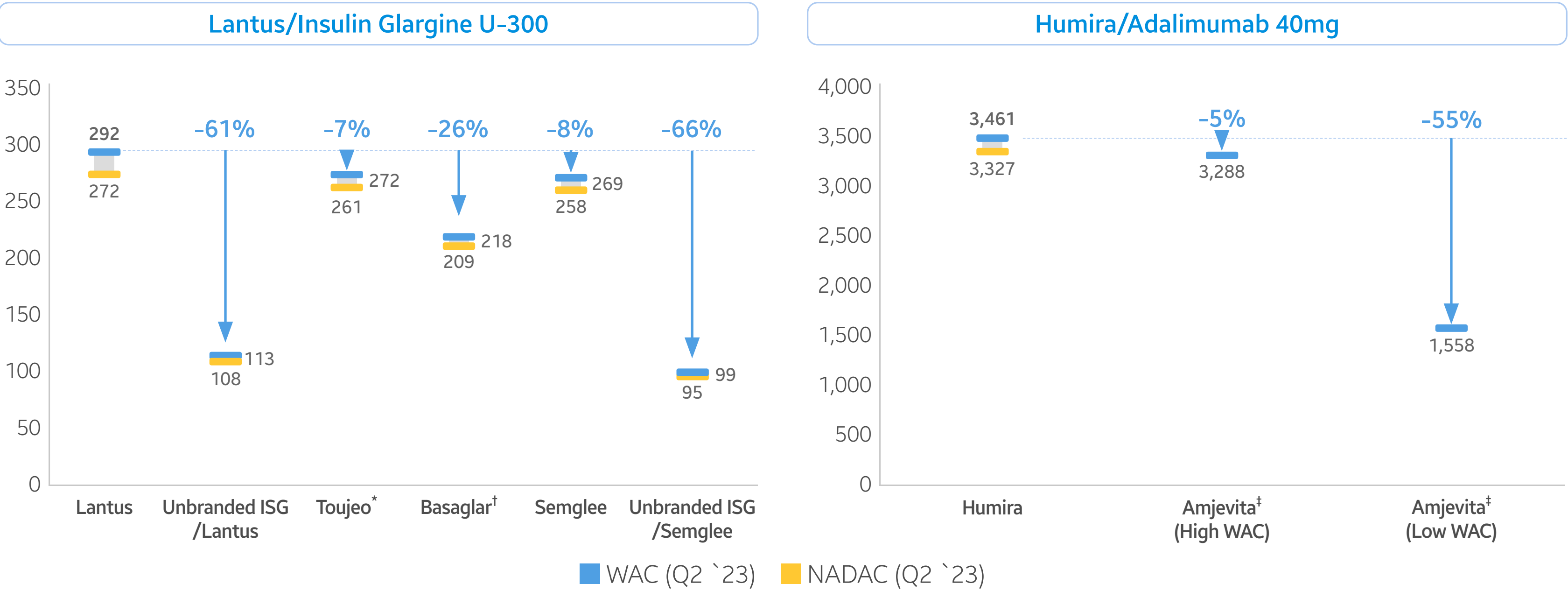
- Oncology
- Supportive Care
- Immunology
- Endocrinology
- Ophthalmology

# Immunology & Endocrinology

## WAC and NADAC – Q2 2023

- ✦ Insulin glargine & adalimumab categories reflect recent pricing practices such as “Unbranded biologics” and high/low WAC options.
- ✦ With no published ASP for products under the pharmacy benefit it is difficult to ascertain the true net price, but NADAC comparisons show the potential for deep discounts and savings in insulin and adalimumab classes.

Figure 6. Q2 2023 WAC and NADAC<sup>2,4</sup>



Products are listed in order of launch  
WAC: Wholesale acquisition cost; NADAC: National average drug acquisition cost; ISG: Insulin glargine  
\*Toujeo is high dose version of Lantus  
†Basaglar is not a biosimilar because it's approved under FDA, a new drug application pathway  
‡Amjevita NADAC price is not published yet

US Biosimilars Approval  
& Launch Status

Biosimilar Price

Medical Benefit

- Oncology
- Supportive Care
- Immunology & Ophthalmology

Pharmacy Benefit

- Immunology & Endocrinology

Biosimilar Market Dynamics

Correlation between  
biosimilar price  
& market adoption

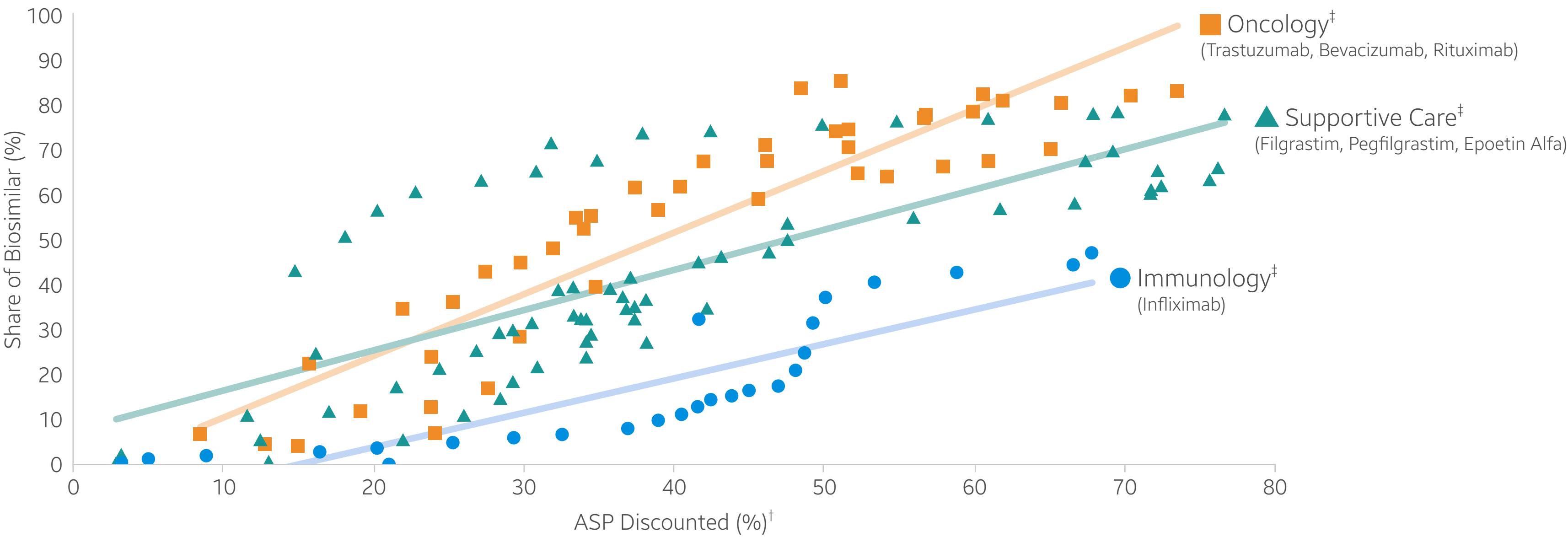
Market Share & Price Trends

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- Supportive Care
- Immunology
- Endocrinology
- Ophthalmology

# Increased Biosimilar Usage Shows Correlation to Lower Costs

- ✦ The below scatter chart shows a positive correlation between biosimilar usage (market share) and price erosion (ASP discount) which indicates a strong relationship between lower biosimilar prices and the higher shares.
- ✦ The slope of oncology line is steeper than others, demonstrating that the oncology category is likely more price-sensitive than supportive care or immunology.

Figure 7. Scatter Chart of Price Discount vs. Share of Biosimilar\*



\*Ranibizumab is not included due to price data is not enough to see correlation and molecules in which ASP does not exist are also excluded  
†Biosimilar ASP discounted % vs. reference product ASP when the first biosimilar launched  
‡ Oncology linear equation:  $y = 1.3735x - 0.0326$ ,  $R^2 = 0.8286$ ; Supportive Care linear equation:  $y = 0.8955x + 0.0753$ ,  $R^2 = 0.5659$ ; Immunology equation:  $y = 0.7664x - 0.1146$ ,  $R^2 = 0.7671$ ;



US Biosimilars Approval  
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Pharmacy Benefit

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Biosimilar Market Dynamics

Correlation between  
biosimilar price  
& market adoption

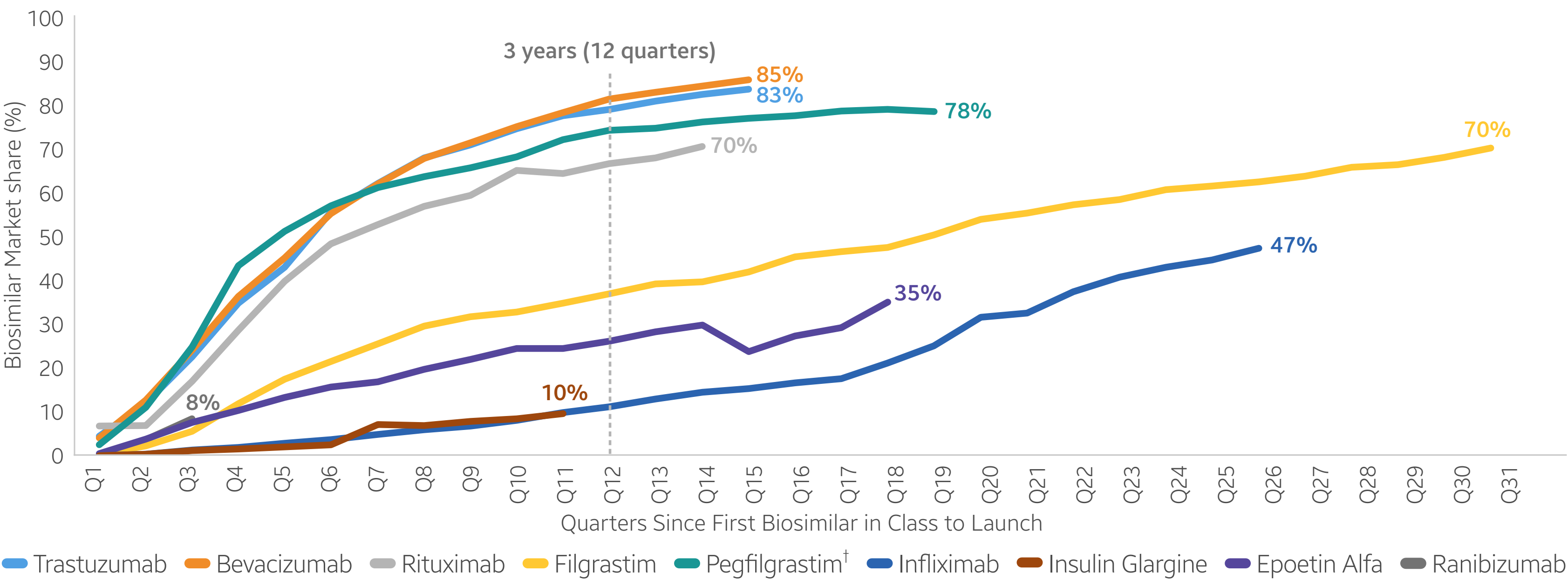
Market Share & Price Trends

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- Endocrinology
- Ophthalmology

# Biosimilar Uptake Varies by Molecule, but Acceptance has been Greater in Oncology than other TAs

- ✦ On average biosimilars gain 53% market share in three years (12 quarters) post initial launch.
- ✦ The oncology TA\* and pegfilgrastim have seen faster acceptance of biosimilars compared to other TAs and molecules.
  - After 3 years, the average biosimilar share was 75%, while the biosimilar share in other TAs was only 25% in the same time period.

Figure 8. Biosimilar Market Share Post-Launch<sup>5</sup>



TA: Therapeutic area  
\*: Trastuzumab, bevacizumab, and rituximab are included  
†Onpro is not included

US Biosimilars Approval  
& Launch Status

Biosimilar Price

Medical Benefit

- Oncology
- Supportive Care
- Immunology & Ophthalmology

Pharmacy Benefit

- Immunology & Endocrinology

Biosimilar Market Dynamics

Correlation between  
biosimilar price  
& market adoption

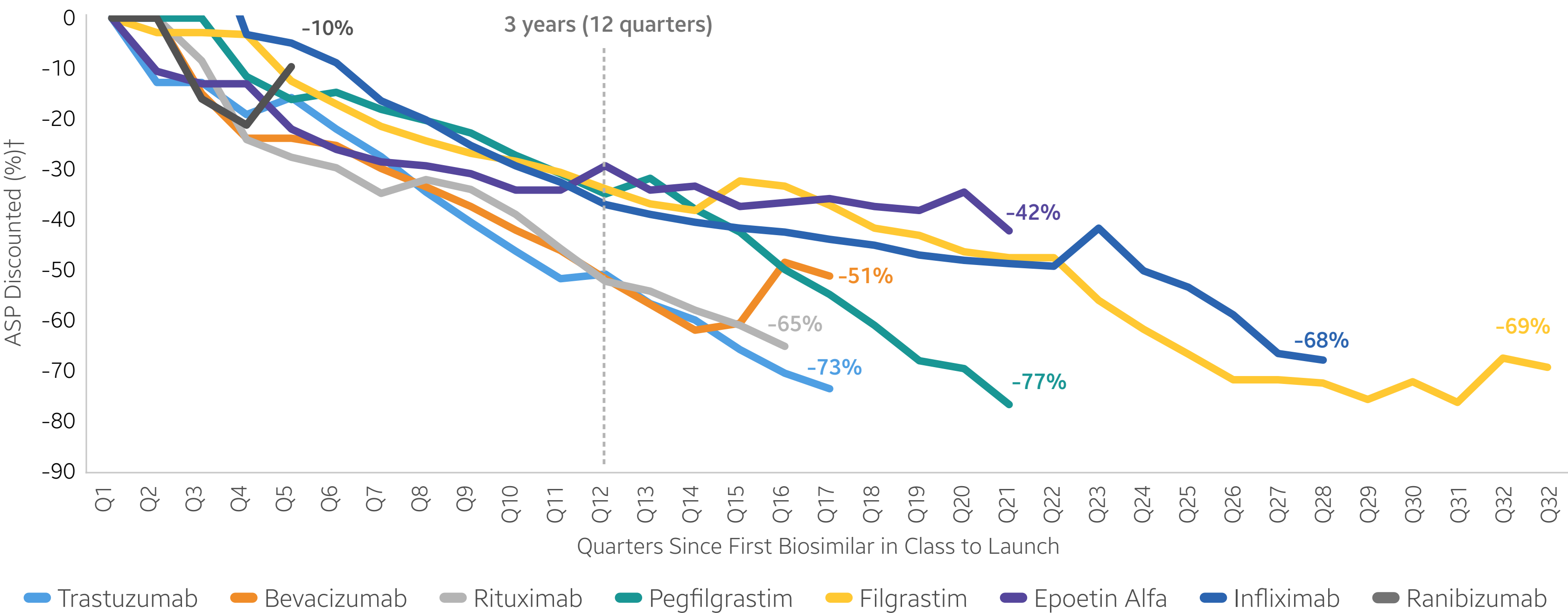
Market Share & Price Trends

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- Endocrinology
- Ophthalmology

# Biosimilars are Reducing Drug Costs across Multiple TAs by Lowering Prices

- ✦ Biosimilar launches have led to significant price decreases over time. ASP declined 41% on average three years (12 quarters) post first biosimilar launch.
- ✦ The ASP for oncology\* biosimilars experienced the steepest decline vs. others.
  - Each falling just over 50% in the first three years (12 quarters) post biosimilar launch.

Figure 9. ASP Trend by Molecule<sup>3</sup>



TA: Therapeutic area; ASP: Average sales price  
\*: Trastuzumab, bevacizumab, and rituximab are included  
†: ASP discounted % vs. reference product ASP when first biosimilar in class launch

US Biosimilars Approval  
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- Immunology & Ophthalmology

Pharmacy Benefit

- Immunology & Endocrinology

Biosimilar Market Dynamics

Correlation between  
biosimilar price  
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Market Share & Price Trends

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- Immunology
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- Ophthalmology

# Market Share and ASP Trends - Herceptin (Trastuzumab)

- ✦ As of Q1 2023, the biosimilar share of the trastuzumab market has reached 83% .
  - The first biosimilar of trastuzumab has been the market leader since Q4 2020.
- ✦ As of Q3 2023, the average ASP of all products is \$1,471 (-65%) and the average for biosimilars alone is \$1,123 (-73%) vs. the reference product's ASP at the time of the first biosimilar launch.

Figure 10. Trastuzumab Volume Market Share<sup>5</sup>

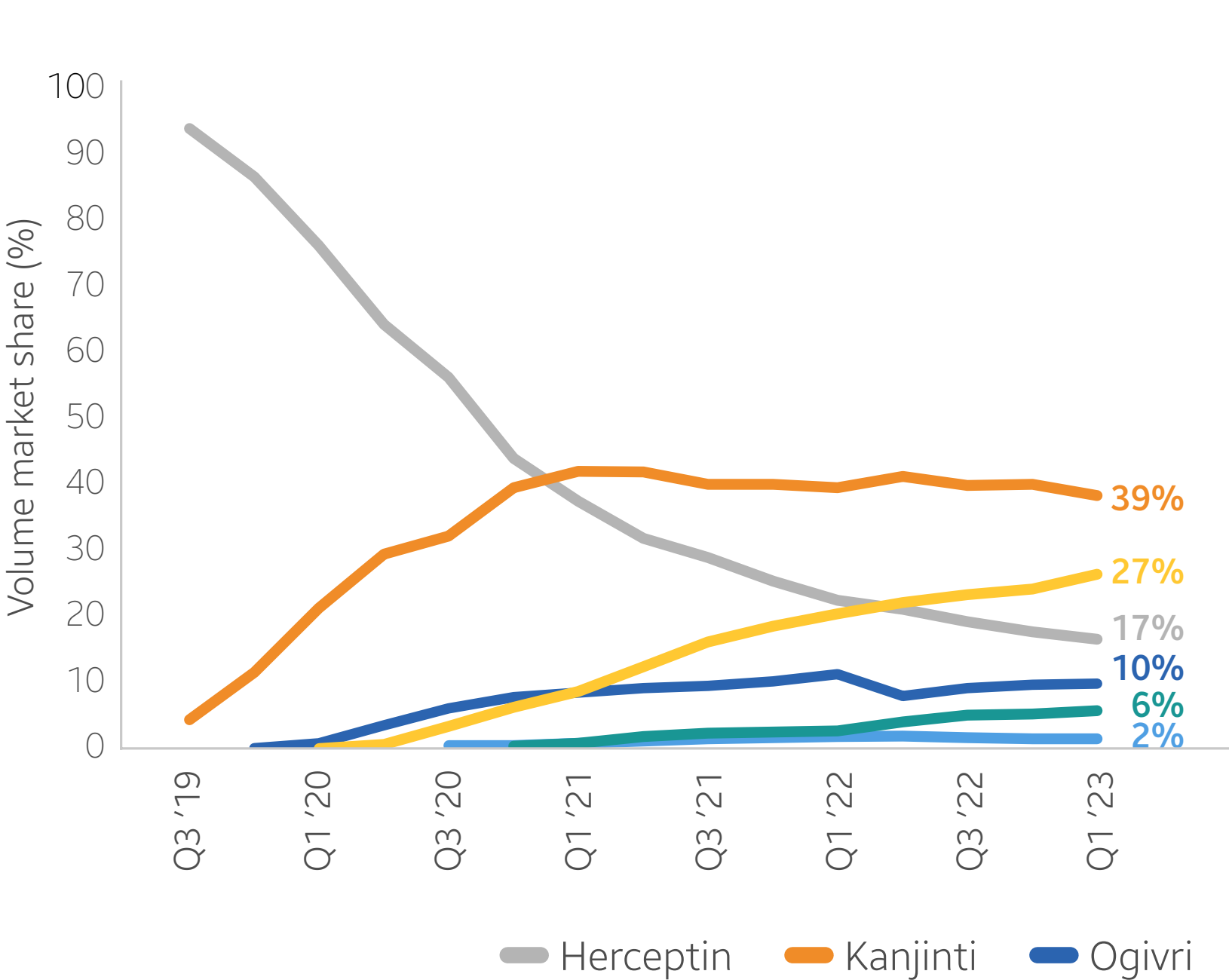
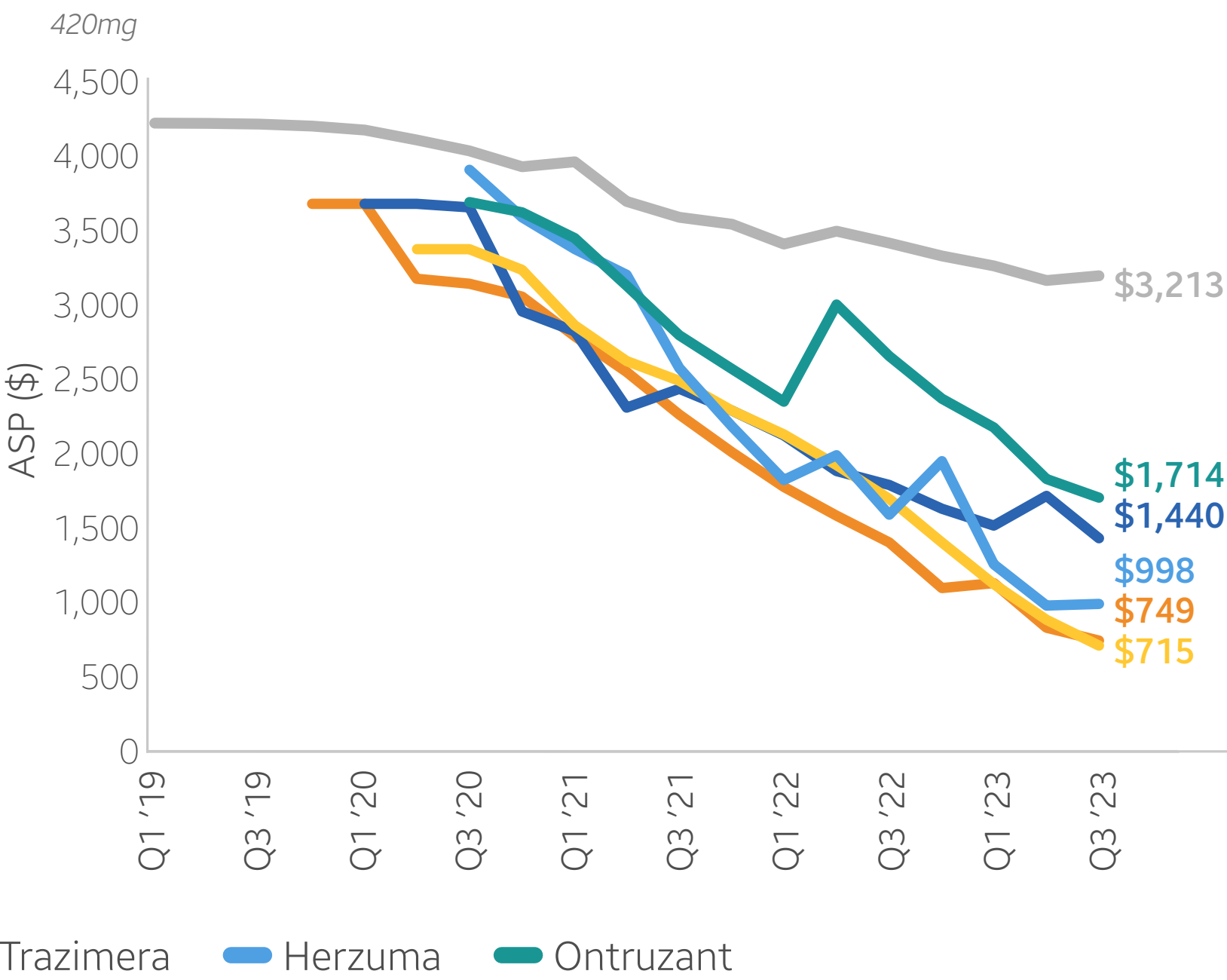


Figure 11. Trastuzumab ASP Trend<sup>3</sup>



Products are listed in legends in order of launch  
ASP: Average sales price



US Biosimilars Approval  
& Launch Status

Biosimilar Price

Medical Benefit

- Oncology
- Supportive Care
- Immunology & Ophthalmology

Pharmacy Benefit

- Immunology & Endocrinology

Biosimilar Market Dynamics

Correlation between  
biosimilar price  
& market adoption

Market Share & Price Trends

- Oncology
- Supportive Care
- Immunology
- Endocrinology
- Ophthalmology

# Market Share and ASP Trends – Avastin (Bevacizumab)

- ✦ As of Q1 2023, the biosimilar share of the bevacizumab market was 85%.
  - Both biosimilars have surpassed the bevacizumab reference product in market share.
- ✦ As of Q3 2023, the average ASP of all products is \$1,819 (-41%) and the average for biosimilars alone is \$1,499 (-51%) vs the reference product's ASP at the time of the first biosimilar launch.

Figure 12. Bevacizumab Volume Market Share<sup>5</sup>

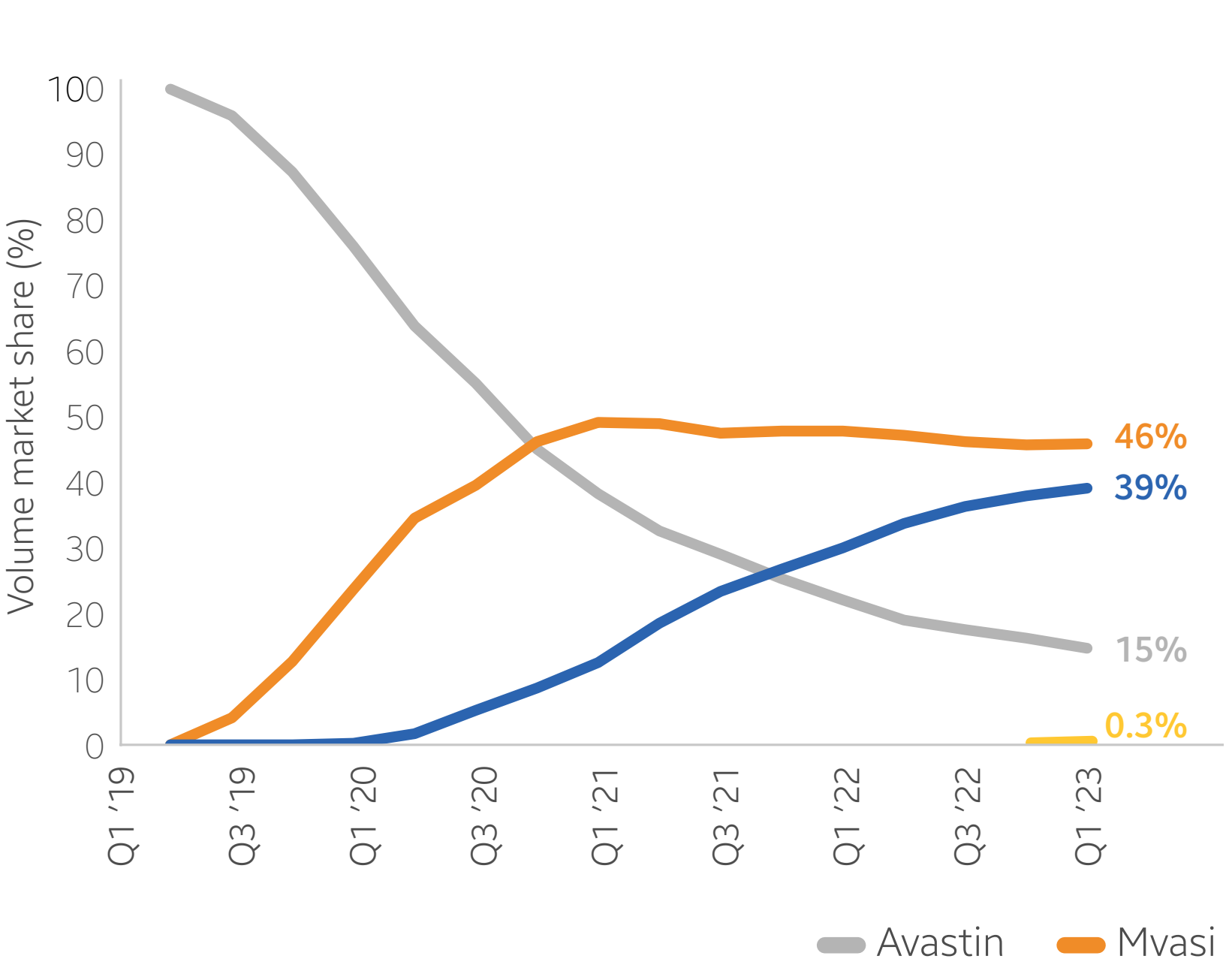
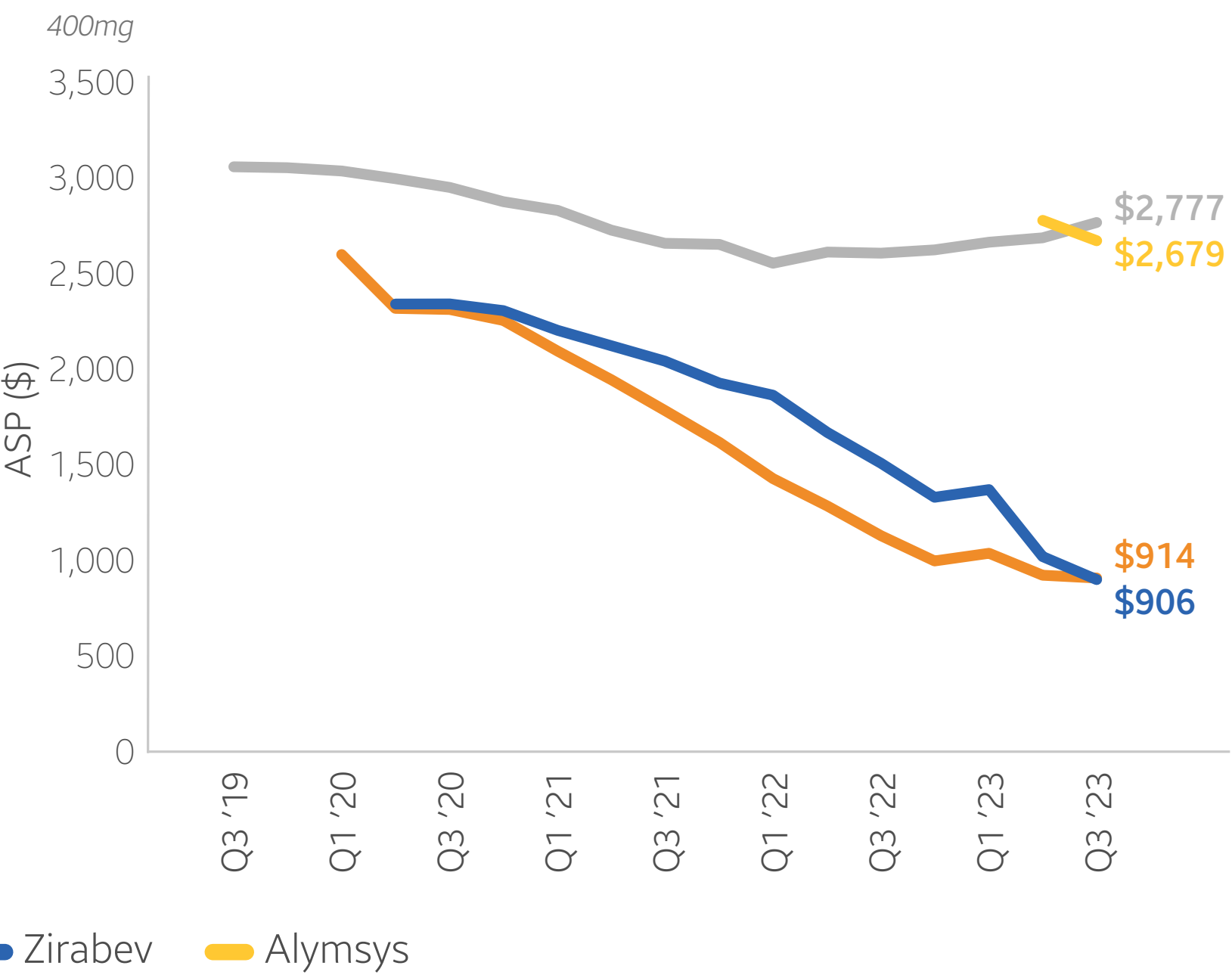


Figure 13. Bevacizumab ASP Trend<sup>3</sup>



Products are listed in legends in order of launch  
ASP: Average sales price

US Biosimilars Approval  
& Launch Status

Biosimilar Price

Medical Benefit

- Oncology
- Supportive Care
- Immunology & Ophthalmology

Pharmacy Benefit

- Immunology & Endocrinology

Biosimilar Market Dynamics

Correlation between  
biosimilar price  
& market adoption

Market Share & Price Trends

- Oncology
- Supportive Care
- Immunology
- Endocrinology
- Ophthalmology

# Market Share and ASP Trends – Rituxan (Rituximab)

- ✦ As of Q1 2023, the biosimilar share of the rituximab market was 70%.
  - A rituximab biosimilar has been the market leader since Q3 of 2022.
- ✦ As of Q3 2023, the average ASP of all products is \$2,125 (-52%) and the average for biosimilars alone is \$1,559 (-65%) vs. the reference product's ASP at the time of the first biosimilar launch.

Figure 14. Rituximab Volume Market Share<sup>5</sup>

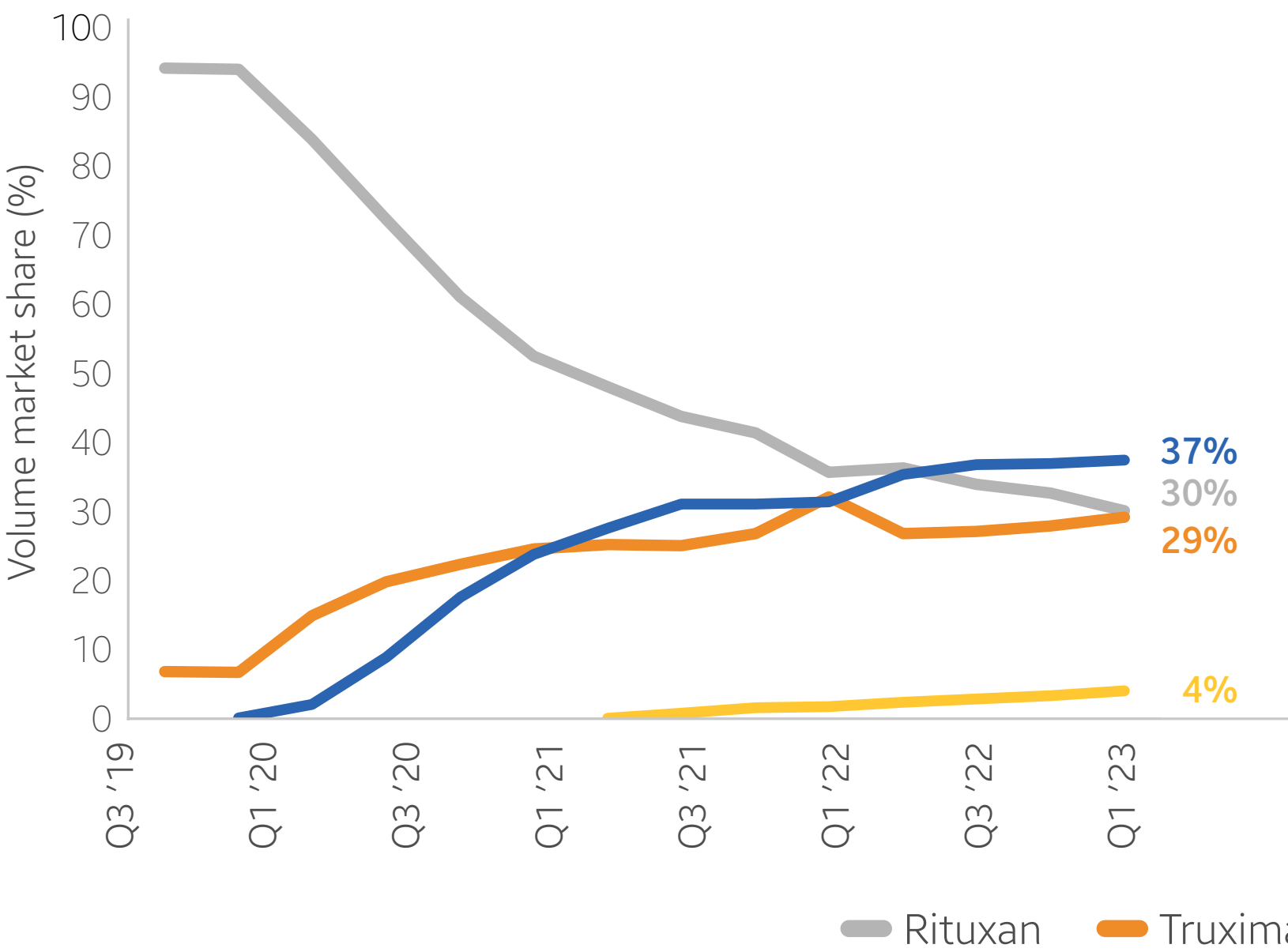
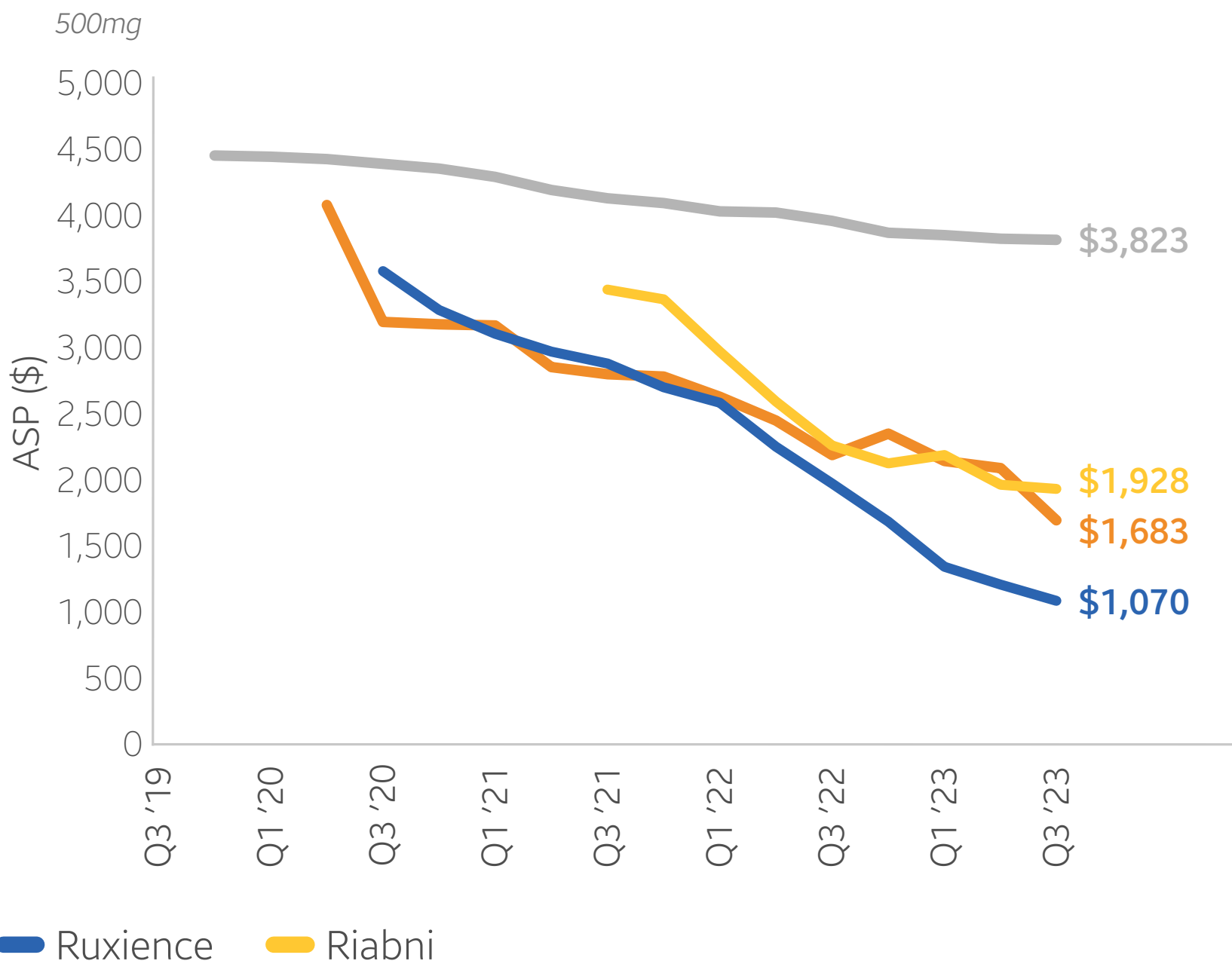


Figure 15. Rituximab ASP Trend<sup>3</sup>



Products are listed in legends in order of launch  
ASP: Average sales price

US Biosimilars Approval  
& Launch Status

Biosimilar Price

Medical Benefit

- Oncology
- Supportive Care
- Immunology & Ophthalmology

Pharmacy Benefit

- Immunology & Endocrinology

Biosimilar Market Dynamics

Correlation between  
biosimilar price  
& market adoption

Market Share & Price Trends

- Oncology
- Supportive Care
- Immunology
- Endocrinology
- Ophthalmology

# Market Share and ASP Trends - Neupogen (Filgrastim)

- ✦ As of Q1 2023, the biosimilar share of the filgrastim market has reached 70%.
  - The first filgrastim biosimilar to launch has been the US market leader since Q3 2018.
- ✦ As of Q3 2023, the average ASP of all products is \$211 (-53%) and the average for biosimilars alone is \$139 (-69%) vs the reference product's ASP at the time of the first biosimilar launch.

Figure 16. Filgrastim Volume Market Share<sup>5</sup>

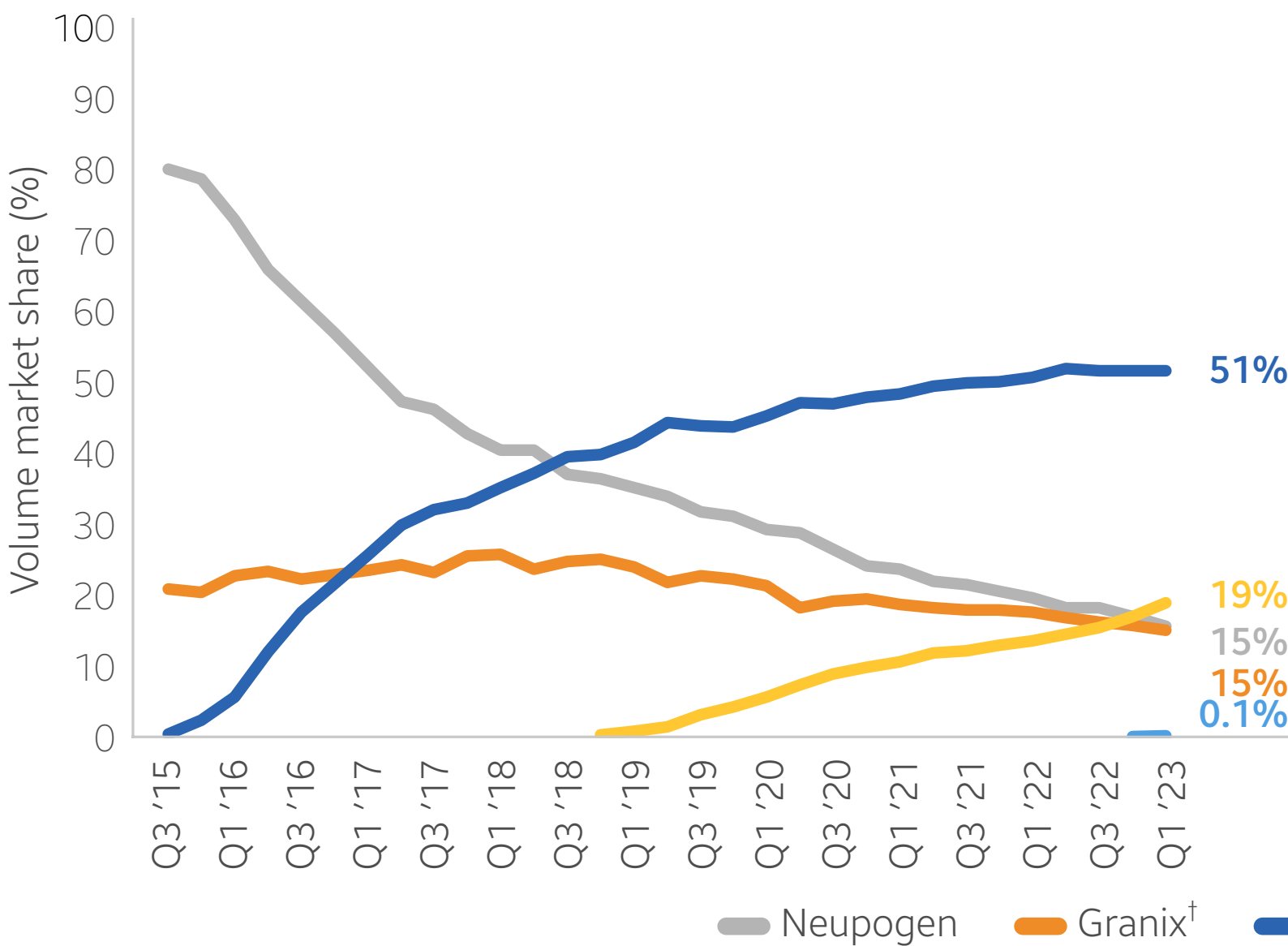
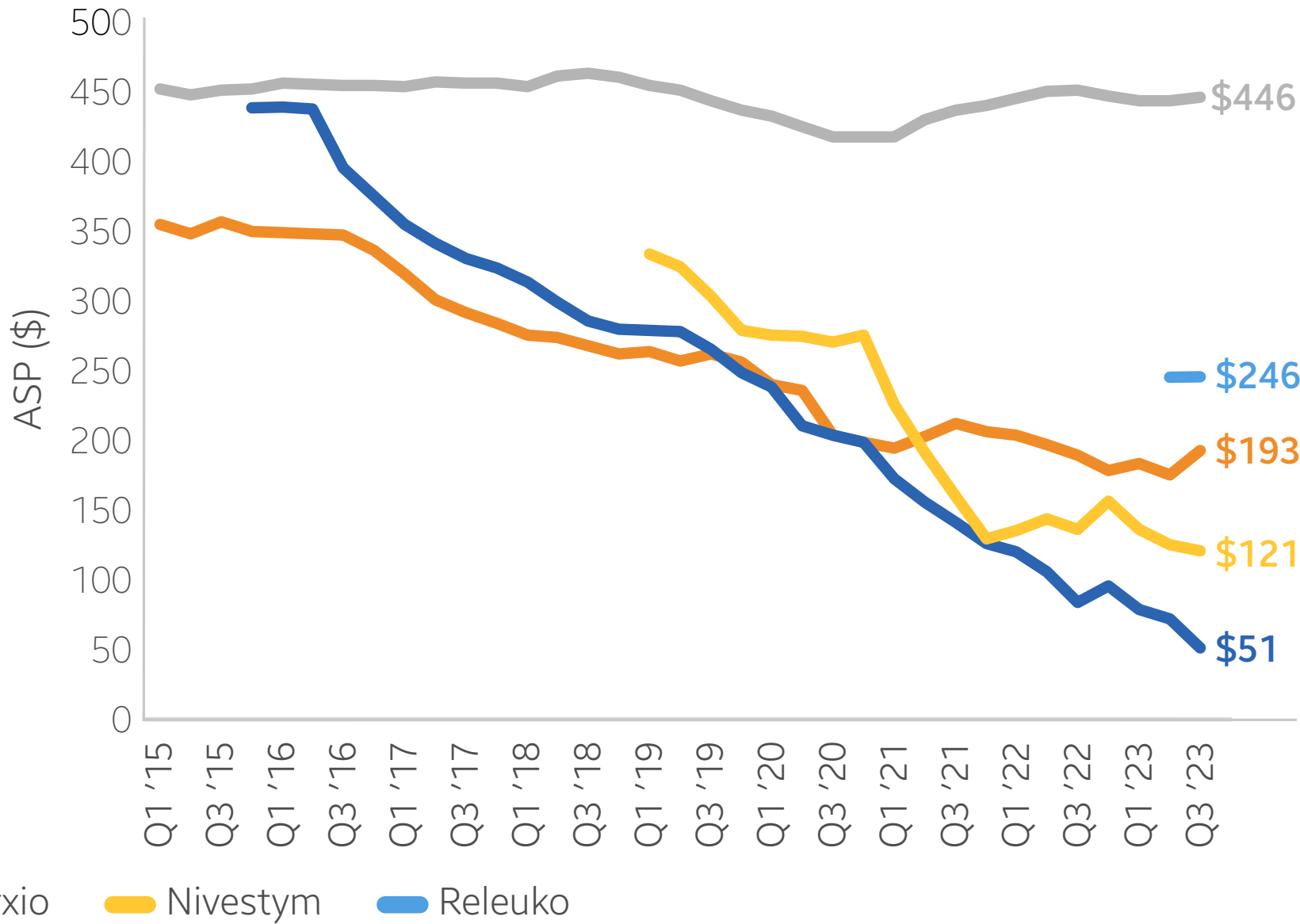


Figure 17. Filgrastim ASP Trend<sup>3</sup>



Products are listed in legends in order of launch  
ASP: Average sales price  
† Granix is not abiosimilar; It's approved under FDA, a new drug application pathway



US Biosimilars Approval  
& Launch Status

Biosimilar Price

Medical Benefit

- Oncology
- Supportive Care
- Immunology & Ophthalmology

Pharmacy Benefit

- Immunology & Endocrinology

Biosimilar Market Dynamics

Correlation between  
biosimilar price  
& market adoption

Market Share & Price Trends

- Oncology
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- Immunology
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- Ophthalmology

# Market Share and ASP Trends - Neulasta (Pegfilgrastim)

- ✦ As of Q1 2023, the biosimilar share of the pegfilgrastim market was 78%.
  - Note that, Stimufend, the 5th Pegfilgrastim biosimilar has now launched, but is not yet captured in the market share or ASP data.
- ✦ As of Q3 2023, the average ASP of all products is \$1,026 (-77%) and the average for biosimilars alone is \$1,041 (-77%) vs. the reference product's ASP at the time of the first biosimilar launch.

Figure 18. Pegfilgrastim Volume Market Share<sup>5</sup>

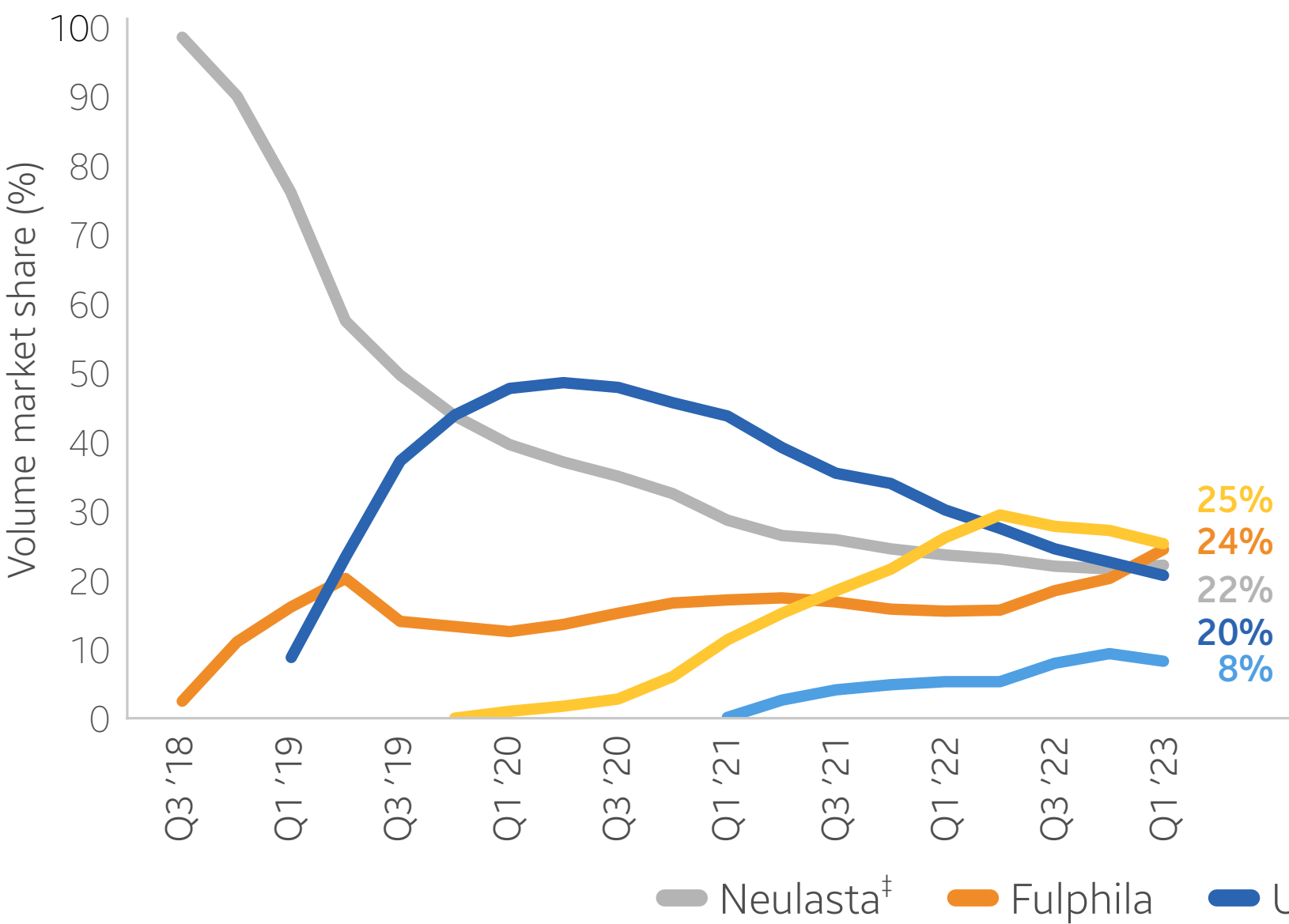
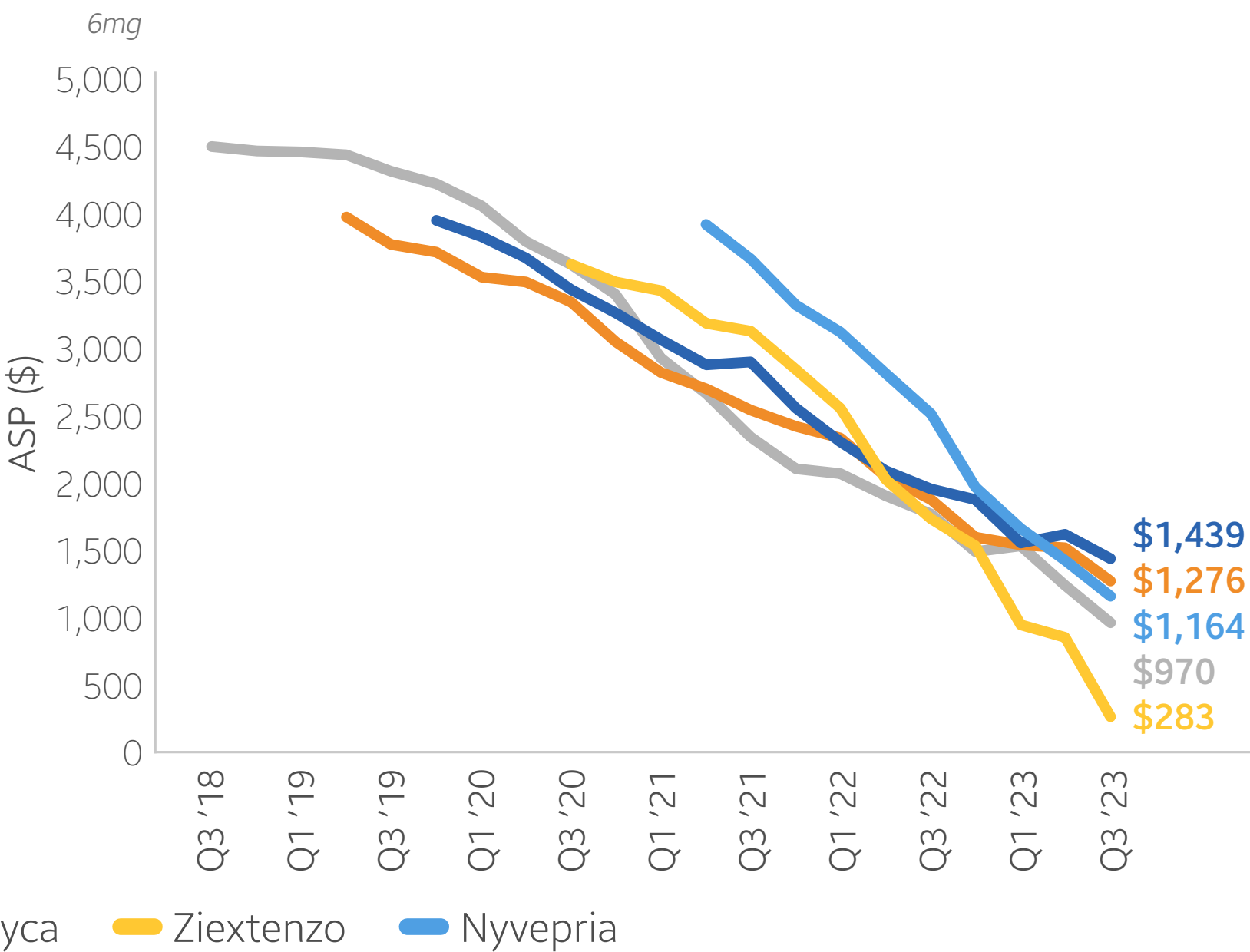


Figure 19. Pegfilgrastim ASP Trend<sup>3</sup>



Products are listed in legends in order of launch  
ASP: Average sales price  
‡: Onpro is not included

US Biosimilars Approval  
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Biosimilar Price

Medical Benefit

- Oncology
- Supportive Care
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Pharmacy Benefit

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# Market Share and ASP Trends - Epogen/Procrit (Epoetin alfa)

- ✦ Retacrit is only biosimilar of Epoetin alfa, which has resulted in less of a decline in ASP compared to markets with multiple biosimilars, however the Epoetin alfa ASP fell about 13% in the latest quarter and is now about half of what it was prior to the Retacrit launch.
- ✦ By matching ASP, the two reference products have maintained a combined 65% share, but that share fell by 7% in the latest quarter.

Figure20. Epoetin Alfa Volume Market Share<sup>5</sup>

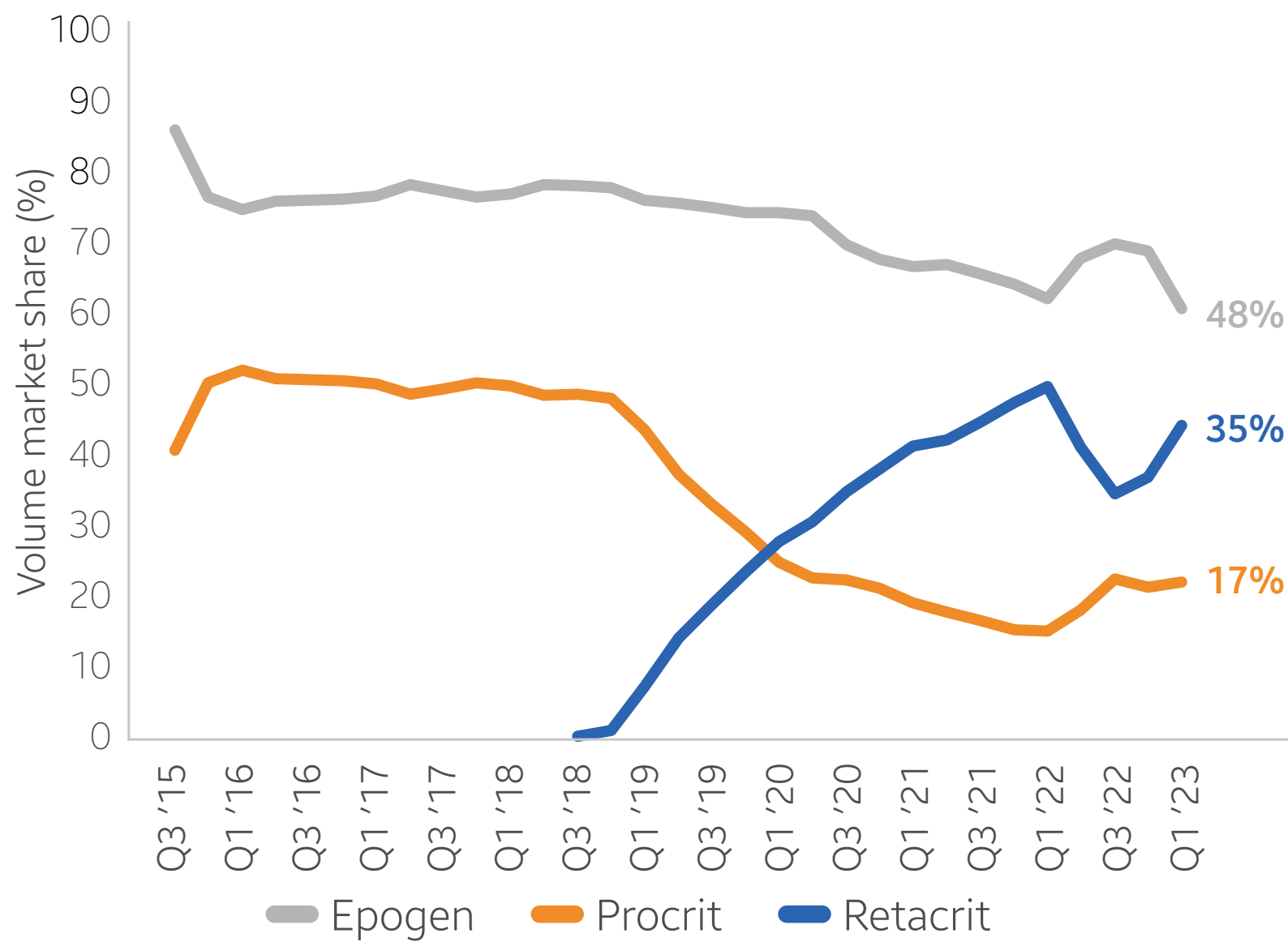
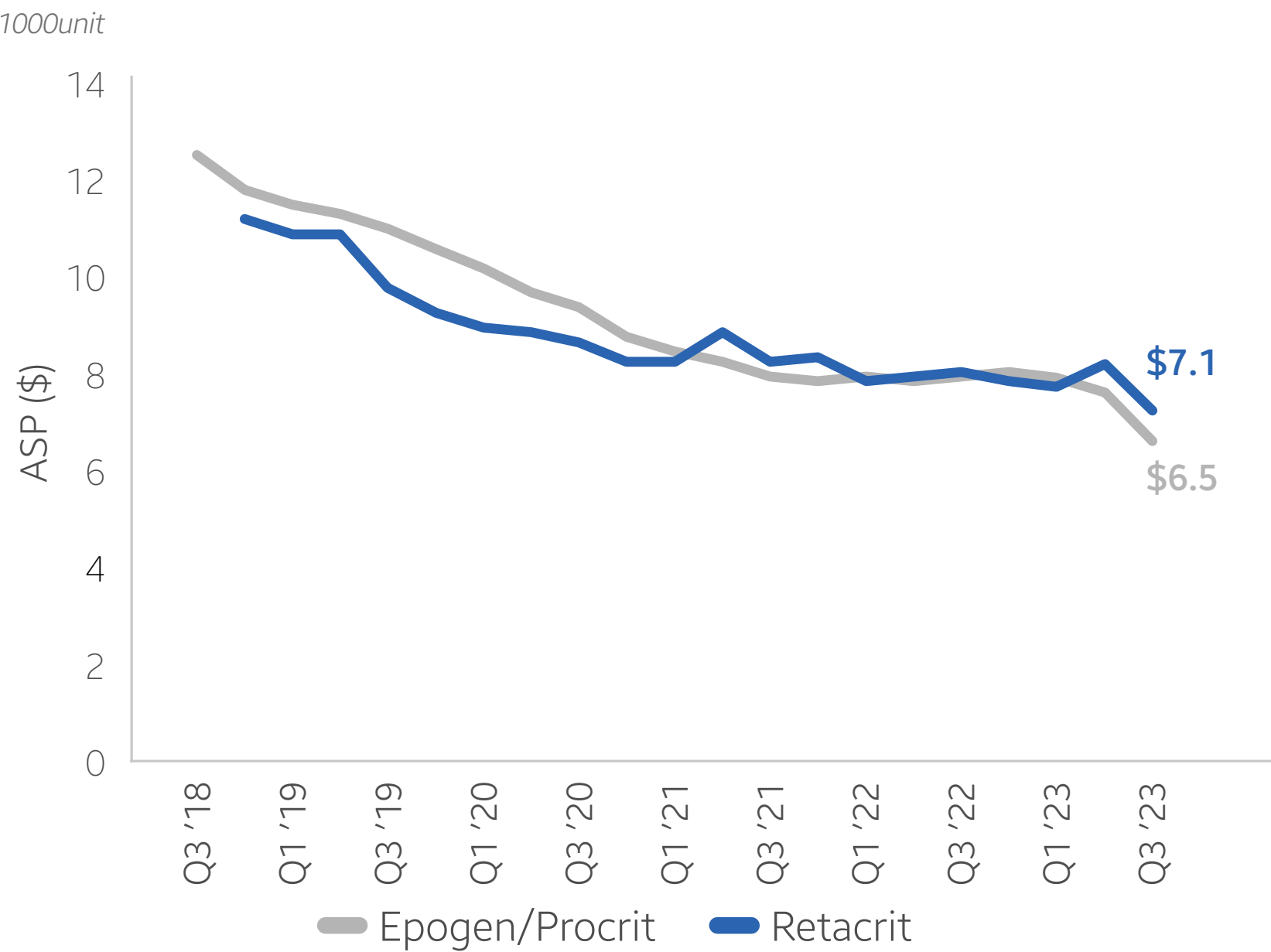


Figure 21. Epoetin alfa ASP Trend<sup>3</sup>



Products are listed in legends in order of launch  
ASP: Average sales price

US Biosimilars Approval  
& Launch Status

Biosimilar Price

Medical Benefit

- Oncology
- Supportive Care
- Immunology & Ophthalmology

Pharmacy Benefit

- Immunology & Endocrinology

Biosimilar Market Dynamics

Correlation between  
biosimilar price  
& market adoption

Market Share & Price Trends

- Oncology
- Supportive Care
- Immunology
- Endocrinology
- Ophthalmology

# Market Share and ASP Trends – Remicade (Infliximab)

- ✦ After a slow start, the Infliximab biosimilar market began to accelerate in year three.
  - As of Q4 2022, Infliximab biosimilar market share has reached 50%.
- ✦ Janssen launched an unbranded biosimilar of Remicade in Q4 2022, re-accelerating the price erosion that had slowed in 2020/21.
- ✦ As of Q3 2023, the average ASP of all products products is \$266 (-66%) and the average for biosimilars alone is \$252 (-68%) vs. the reference product's ASP at the time of the first biosimilar launch.

Figure 22. Infliximab Volume Market Share<sup>5</sup>

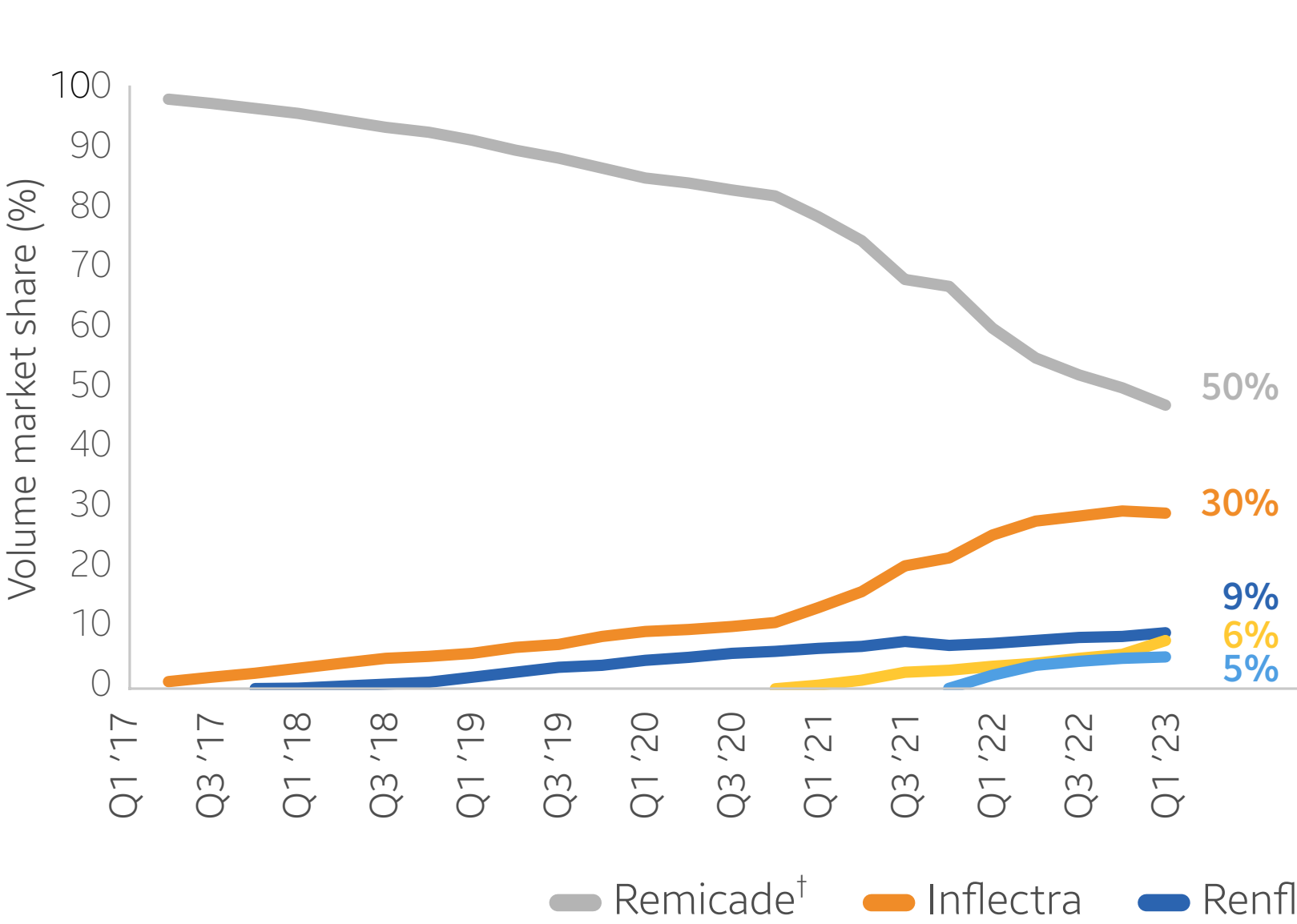
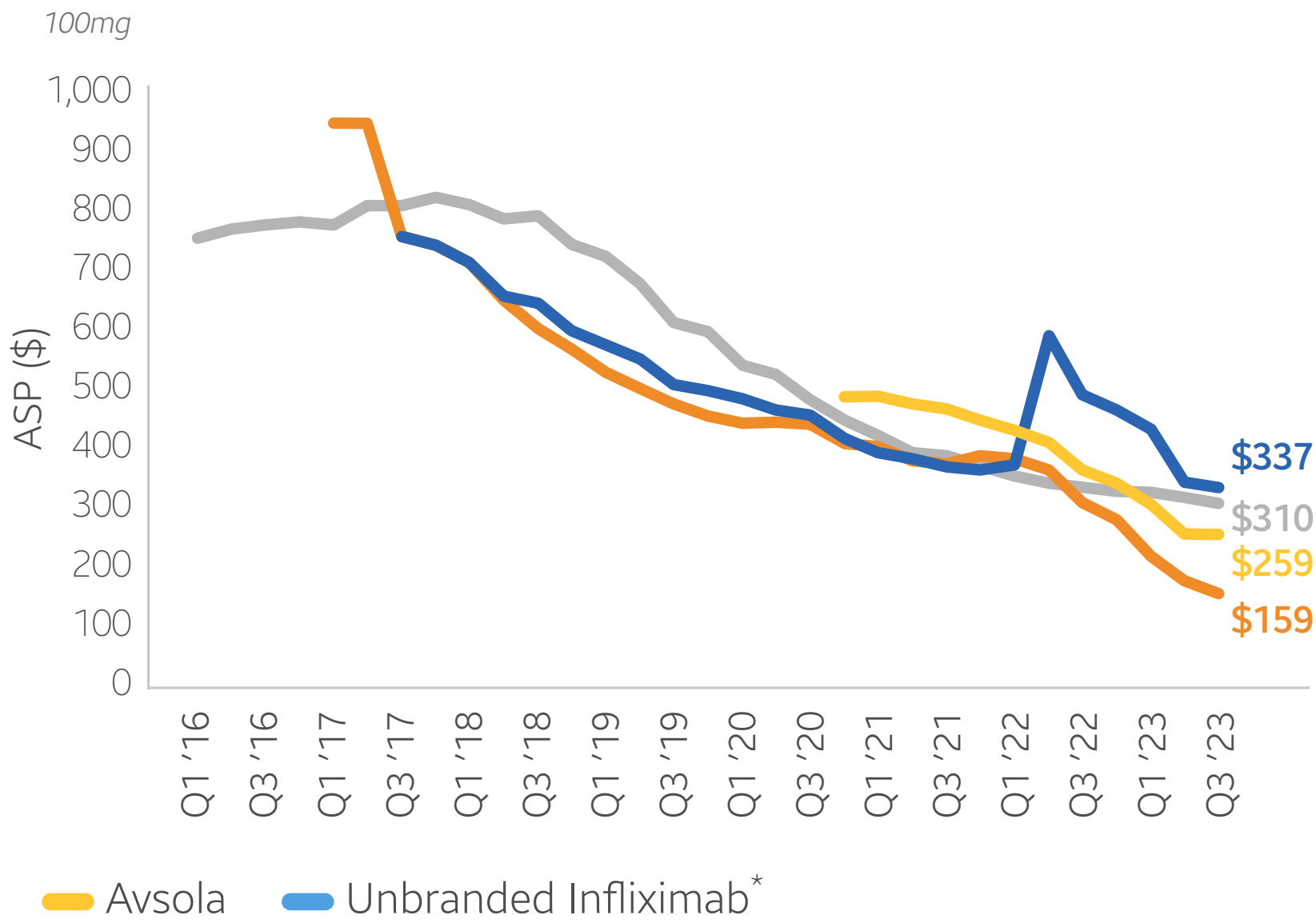


Figure 23. Infliximab ASP Trend<sup>3</sup>



Products are listed in legends in order of launch  
ASP: Average sales price  
\*Unbranded Infliximab is Remicade without the brand name  
†Remicade and Unbranded Infliximab share their J code



US Biosimilars Approval  
& Launch Status

Biosimilar Price

Medical Benefit

- Oncology
- Supportive Care
- Immunology & Ophthalmology

Pharmacy Benefit

- Immunology & Endocrinology

Biosimilar Market Dynamics

Correlation between  
biosimilar price  
& market adoption

Market Share & Price Trends

- Oncology
- Supportive Care
- Immunology
- Endocrinology
- Ophthalmology

# Market Trends – Humira (Adalimumab)

- ✦ Amjevita was the first Humira biosimilar to enter the US Market in January 2023.
  - Amjevita is offering customers two pricing options. One with a higher WAC, just 5% less the Humira but with significant rebate opportunities and the other with a much lower WAC that is discounted by 55% compared to Humira WAC (\$3,461).
- ✦ With the Yuflyma approval last month, an additional eight biosimilars have gained FDA approval and are expected launch as early as July of this year.

Figure 24. Adalimumab Volume Market Share<sup>5</sup>

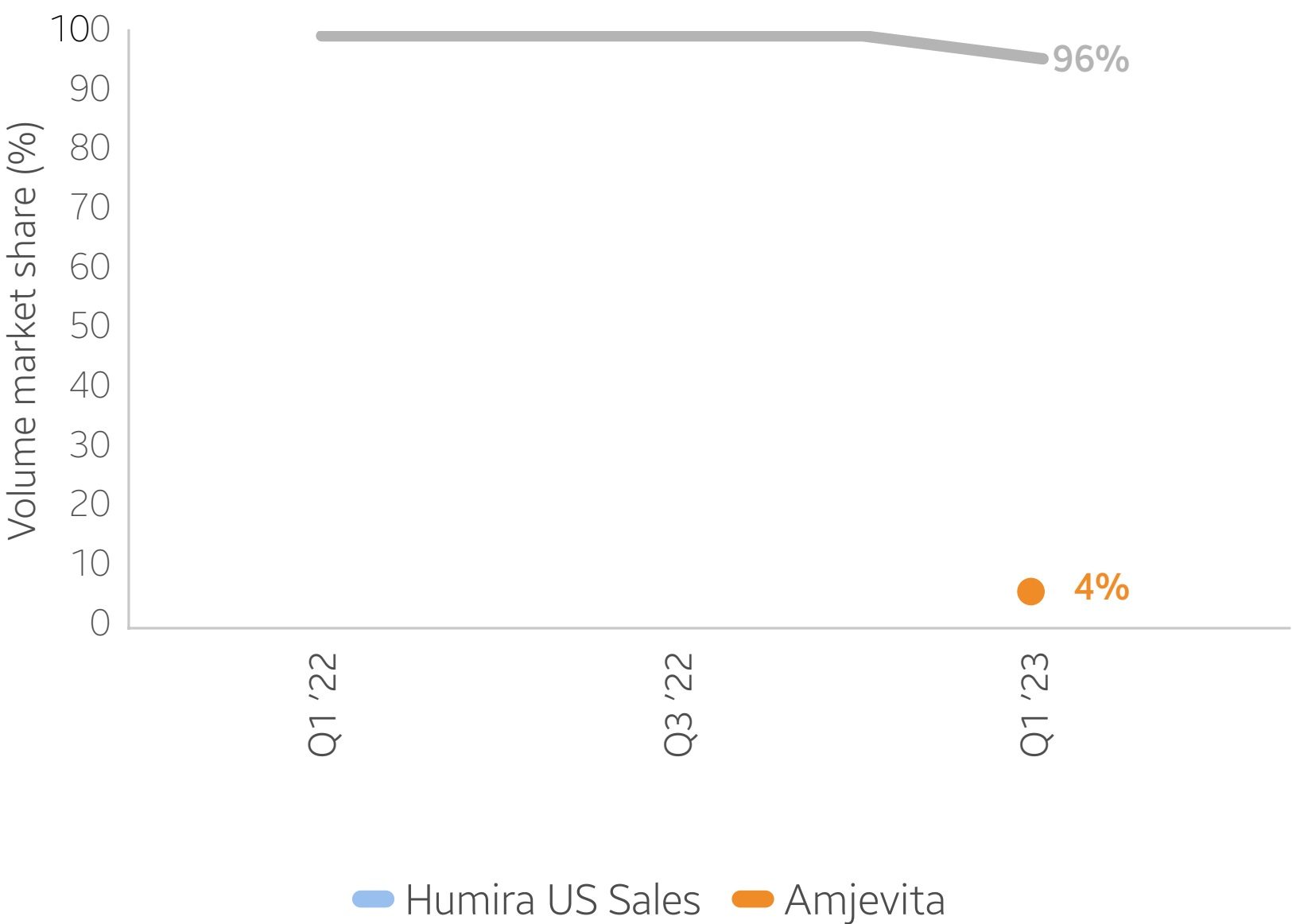
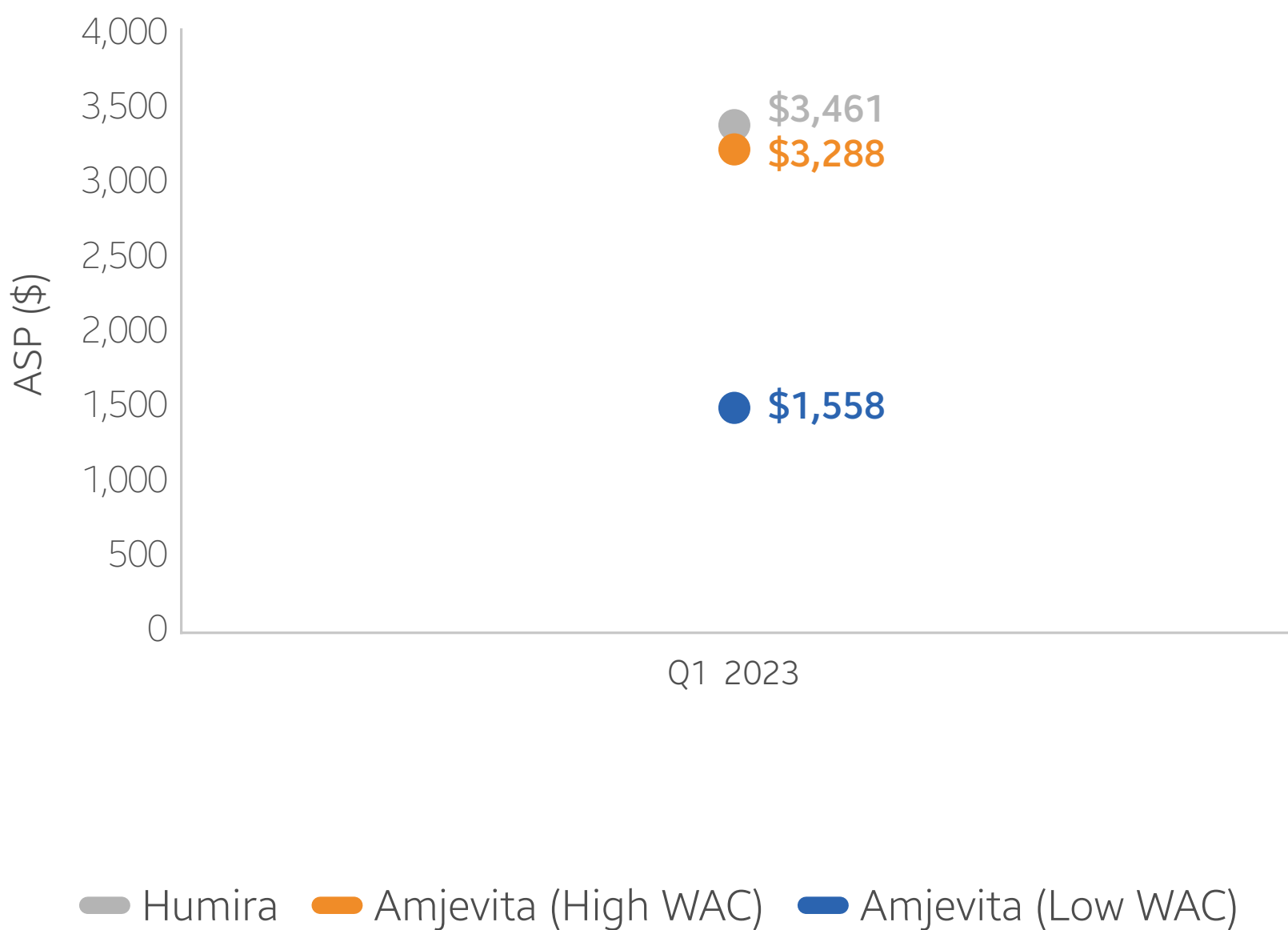


Figure 25. Adalimumab WAC Trend<sup>2</sup>



WAC: Wholesale acquisition cost

US Biosimilars Approval  
& Launch Status

Biosimilar Price

Medical Benefit

- Oncology
- Supportive Care
- Immunology & Ophthalmology

Pharmacy Benefit

- Immunology & Endocrinology

Biosimilar Market Dynamics

Correlation between  
biosimilar price  
& market adoption

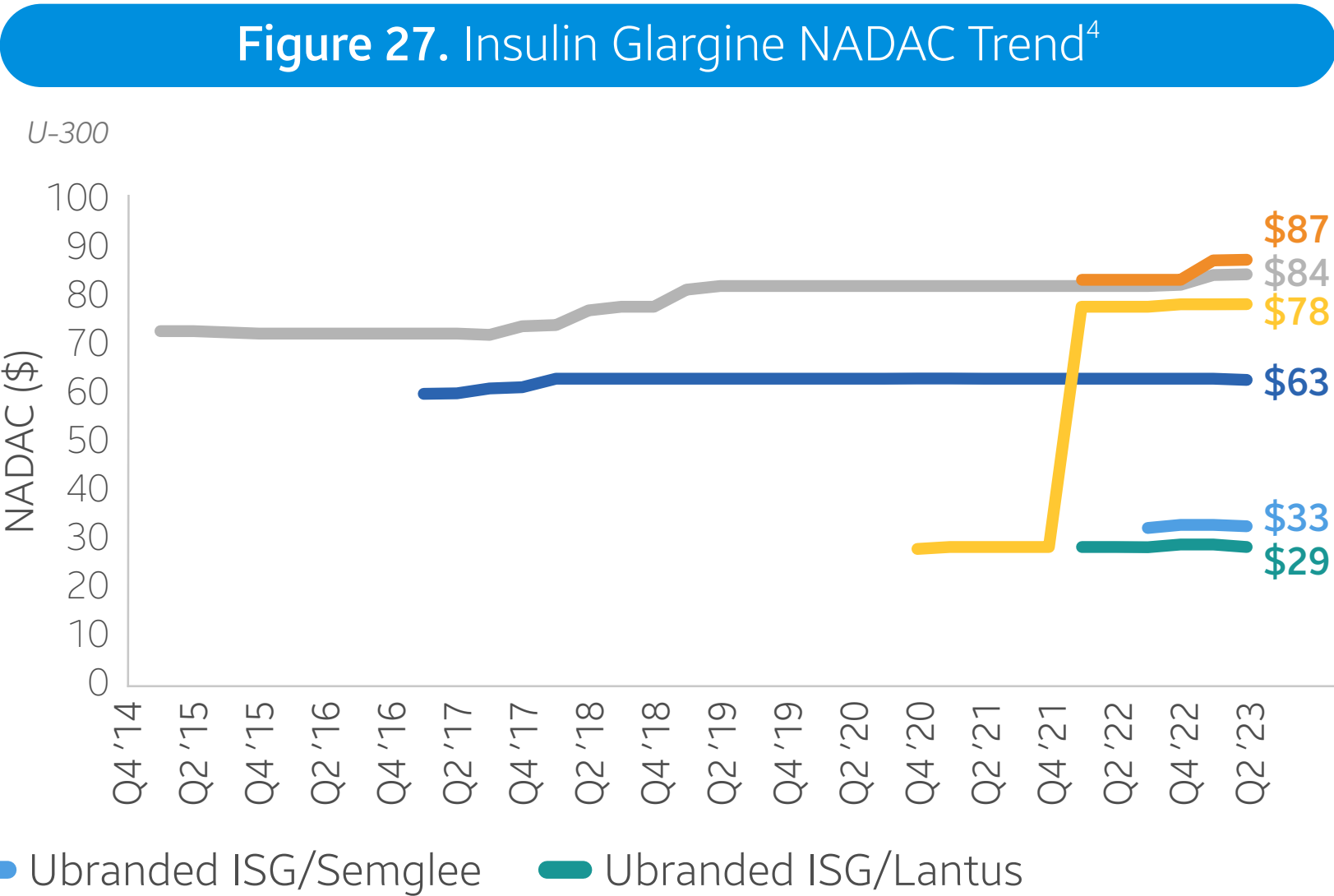
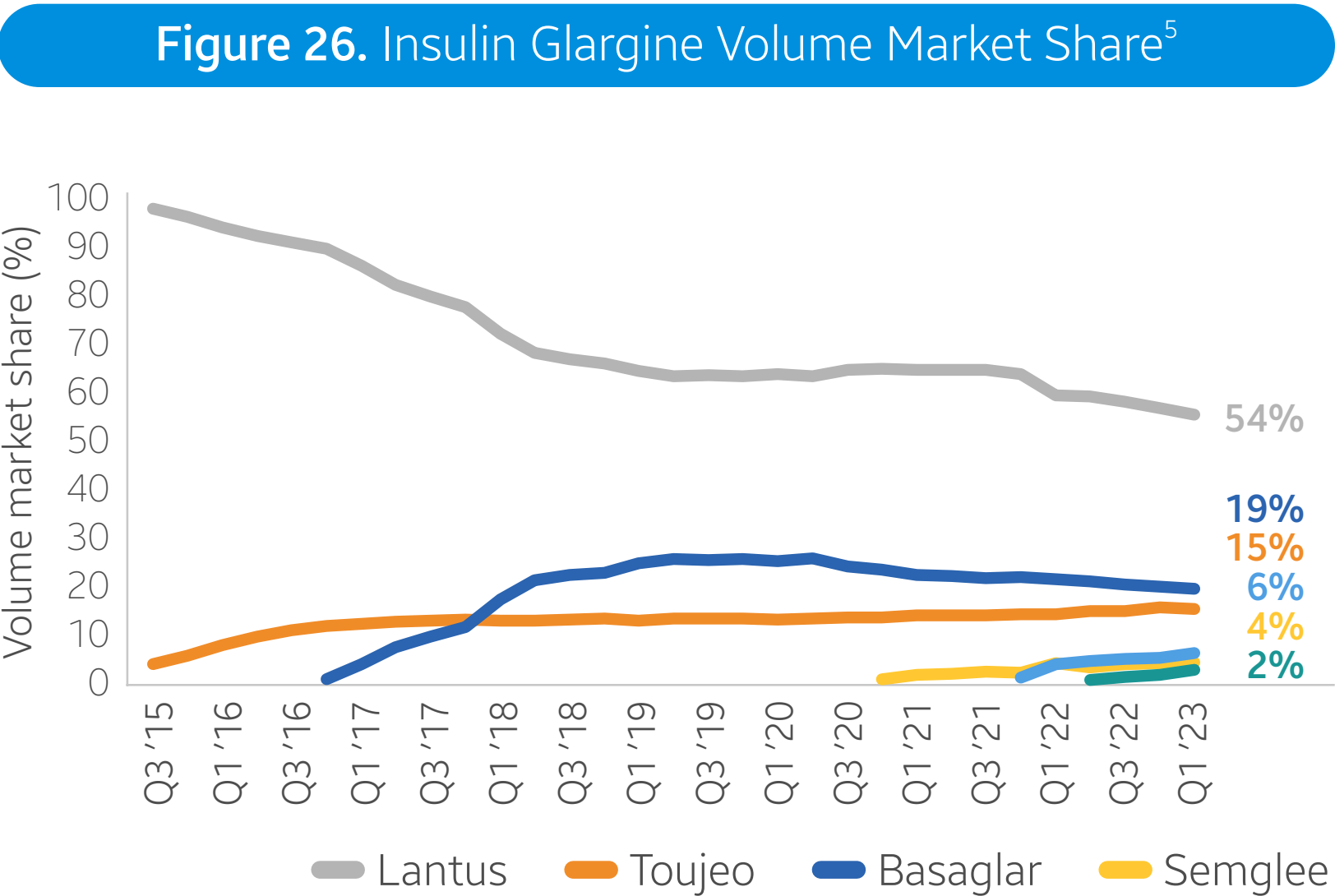
Market Share & Price Trends

- Oncology
- Supportive Care
- Immunology
- Endocrinology
- Ophthalmology

# Market Share and NADAC Trends

## - Lantus (Insulin glargine)

- ✦ Sanofi currently markets three versions of insulin glargine(ISG): the reference product, Lantus; Toujeo (a higher dose ISG); and an unbranded ISG, which can be thought as the biologic version of an ‘authorized generic.’
- ✦ Semglee, which launched in 2020, is the only biosimilar in this market.
  - Basaglar is a version of insulin glargine that is not considered a Lantus biosimilar due to it's approval under FDA, via a new drug application pathway.
- ✦ By analyzing NADAC, we can see that the unbranded ISGs are discounted by as much as 66%, compared to Lantus.
  - Semglee, after initially launching at a similar discount, increased its price to within 10% of Lantus’ in 2022 when it received an interchangeability designation and launched an unbranded ISG as a lower priced alternative.



Legends are listed in order of launch  
ISG: Insulin Glargine; NADAC: National average drug acquisition cost

US Biosimilars Approval  
& Launch Status

Biosimilar Price

Medical Benefit

- Oncology
- Supportive Care
- Immunology & Ophthalmology

Pharmacy Benefit

- Immunology & Endocrinology

Biosimilar Market Dynamics

Correlation between  
biosimilar price  
& market adoption

Market Share & Price Trends

- Oncology
- Supportive Care
- Immunology
- Endocrinology
- Ophthalmology

# Market Share and ASP Trends

## - Lucentis (Ranibizumab)

- ✦ As of Q1 2023, two biosimilars have launched and their market share is 8%.
- ✦ As of Q3 2023, the average ASP of all products is \$1,154 (-11%) % and the average for biosimilars alone is \$1,173 (-10%) vs. the reference product's ASP at the time of the first biosimilar launch.

Figure 28. Ranibizumab Volume Market Share<sup>5</sup>

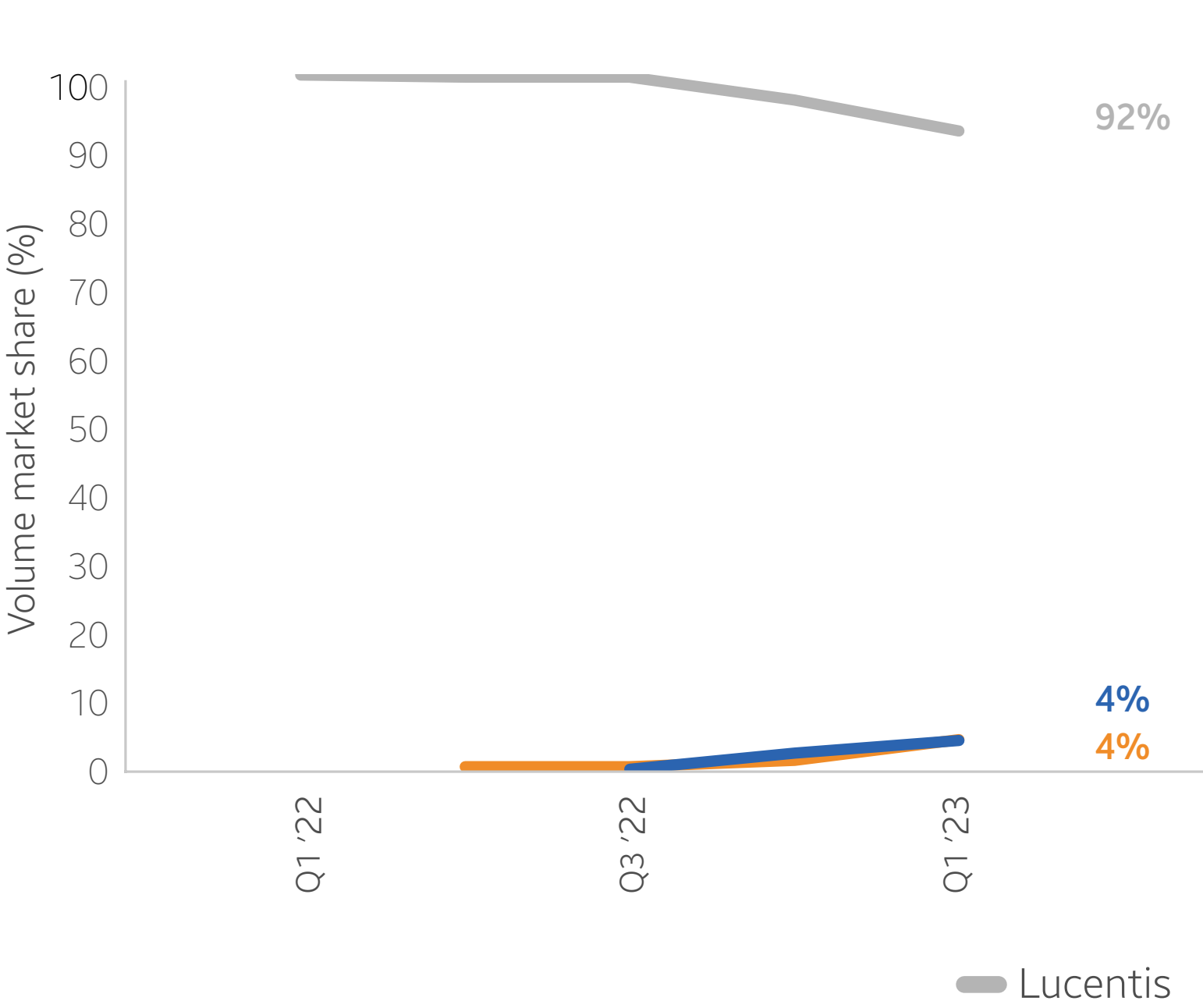
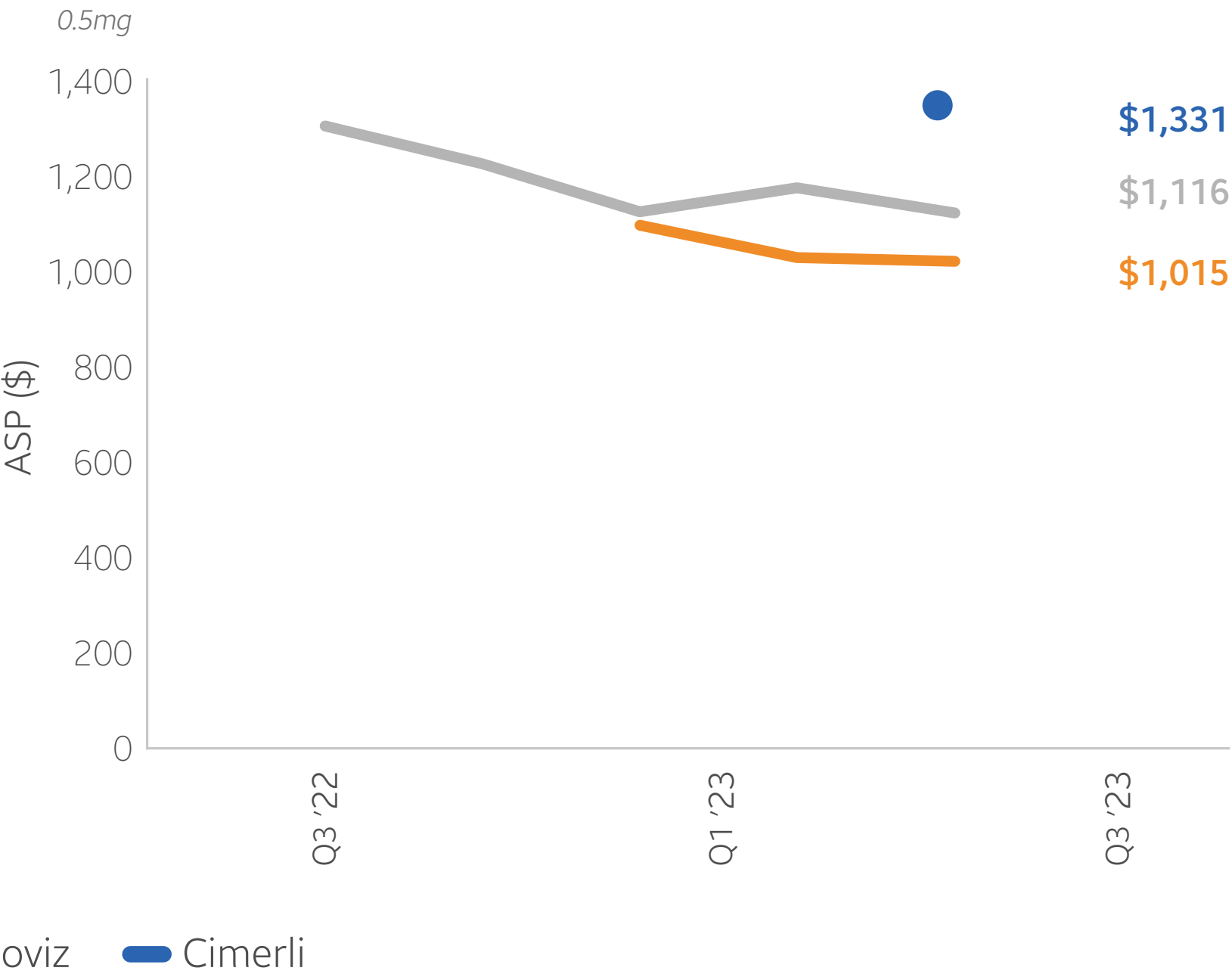


Figure 29. Ranibizumab ASP Trend<sup>3</sup>



Products are listed in legends in order of launch  
ASP: Average sales price



US Biosimilars Approval  
& Launch Status

Biosimilar Price

Medical Benefit

- Oncology
- Supportive Care
- Immunology & Ophthalmology

Pharmacy Benefit

- Immunology & Endocrinology

Biosimilar Market Dynamics

Correlation between  
biosimilar price  
& market adoption

Market Share & Price Trends

- Oncology
- Supportive Care
- Immunology
- Endocrinology
- Ophthalmology

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*Based on internal analysis by SAMSUNG BIOEPIS CO., LTD. using data from the following source: IQVIA MIDAS® in Standard Units for the period Jan 2017 – Mar 2023 reflecting estimates of real-world activity. Copyright IQVIA. All rights reserved.*

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