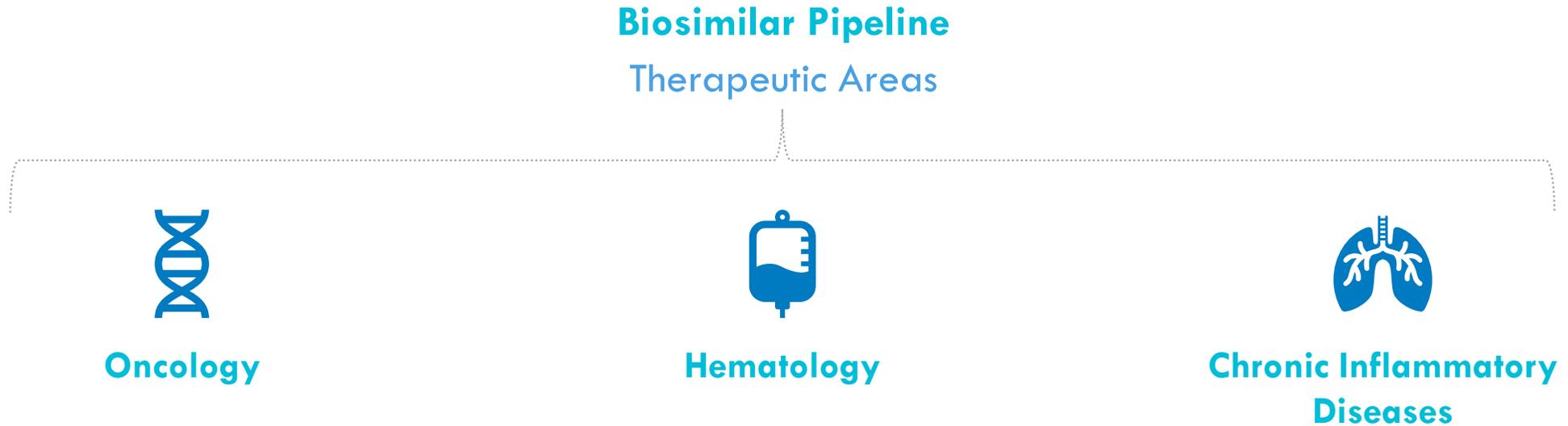


Measures leading to successful uptake & the current state of market access for biosimilars in the U.S

Presented by Chad Pettit, Executive Director of Marketing
Global Biosimilars Commercial, Amgen

AMGEN IS DEVELOPING BIOSIMILAR PRODUCTS IN KEY THERAPEUTIC CATEGORIES

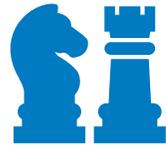


Amgen Biosimilars Program
11 Medicines in Portfolio

ELEMENTS CRUCIAL TO FOSTERING A ROBUST AND SUSTAINABLE MARKETPLACE WITH BIOSIMILARS



Stakeholder confidence requires scientifically appropriate regulatory standards



A marketplace that encourages competition allows for meaningful savings and long-term sustainability



Scientifically accurate educational outreach supports market success



A successful marketplace requires a foundation of intellectual property

THE U.S. MARKETPLACE WITH BIOSIMILARS IS NOW WELL-ESTABLISHED AND ACCELERATING ACROSS MULTIPLE THERAPEUTIC AREAS



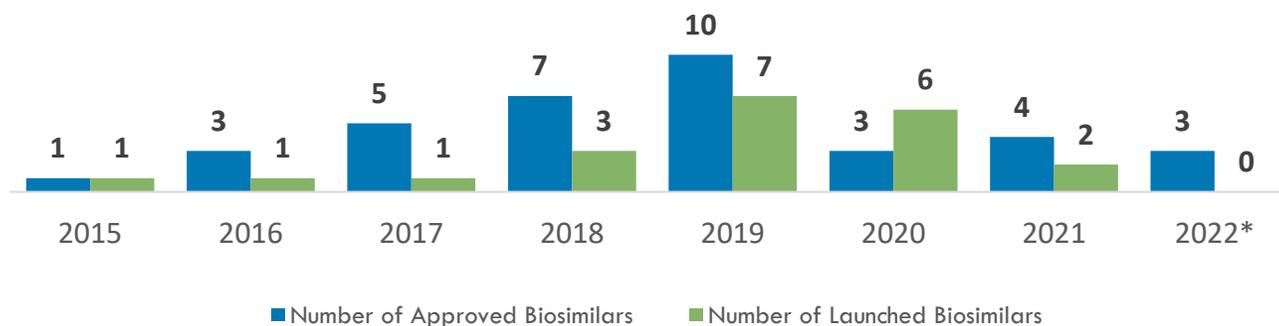
Figure 1 shows the number of biosimilars approved and launched each year from 2015 to 2022. There was a dramatic increase in biosimilar launches from 2018 to 2020 compared to prior years.²

The slowdown of biosimilar approvals in 2020 and 2021 was likely due to several factors, some of which were pandemic-related. Over the next few years, the biosimilars marketplace should recover from this decline in activity, with new approvals and launches expected to increase at pre-2020 rates.

36 approved biosimilars

21 launched biosimilars

Figure 1. Number of Approved and Launched Biosimilars in the US, per Year²



Although there was an overall decline in the number of approvals during the 2020 to 2021 timeframe, the number of development programs that are participating in the FDA's Biosimilar Development Program has continued to rise³:

77 programs in March 2019	79 programs in March 2020	90 programs in March 2021	96 programs in June 2022
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Key: BLA – Biologics License Application; FDA – Food and Drug Administration; US – United States.

*2022 totals include latest available information (January to May 2022).

†Program totals reflect latest available data.

Note: SEMGLEE® (insulin glargine-yfgn) was approved by the FDA in June 2020 with a stand-alone BLA. The FDA subsequently approved SEMGLEE as an interchangeable biosimilar in July 2021.^{4,5}

THE US BIOSIMILAR LANDSCAPE IS ADVANCING FASTER THAN THE EU DURING A COMPARABLE PERIOD OF TIME

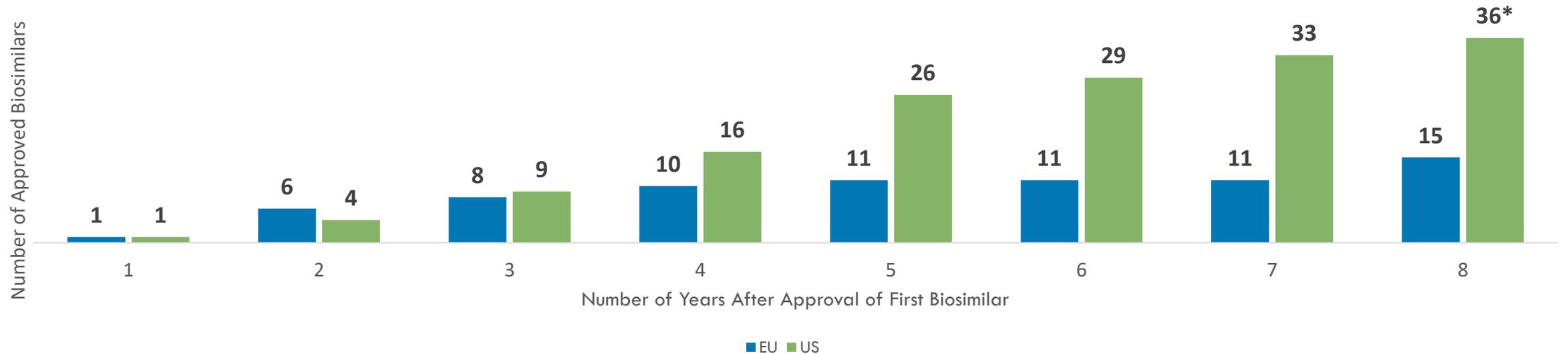


Figure 2 shows the cumulative number of biosimilars approved in the EU vs the US, beginning with the year the first biosimilar was approved.^{6,7} The slowdown in EU approvals between years 4 and 7 was likely due to several factors that may include intellectual property timelines and duration of development programs.

In the 8 years after the EU approved the first biosimilar (2006), there were 15 approved biosimilars.⁷

By contrast, in the 8 years after the US approved the first biosimilar (2015), there were 36 approved biosimilars.⁶

Figure 2. Comparison of Cumulative Approved Biosimilars in the EU and the US^{6,7}



Key: EU – European Union; US – United States.

*Year 8 includes US approvals and launches through May 2022.

BIOSIMILARS LAUNCH WITH SIGNIFICANT DISCOUNTS TO WAC AND ASP



Biosimilars are helping reduce healthcare costs by providing significant wholesale acquisition cost (WAC) and average sales price (ASP) savings at launch and through price competition, resulting in the opportunity for additional savings over time.

As shown in **Figure 4**, manufacturers are launching biosimilars at a WAC that is generally lower than the reference product (biosimilars' ASP becomes available 2 full quarters after launch).⁸

Biosimilar WAC vs Reference Product ASP:
Almost all biosimilars have launched at a WAC of 3% to 24% below the reference product ASP.

Biosimilar WAC vs Reference Product WAC:
Biosimilars launch at a WAC that is generally 15% to 37% lower than the reference product.

Figure 4. Price at Launch vs Reference Product⁹



Please see slides 11-15 for Boxed Warning information for AVSOLA, EPOGEN, Enbrel, KANJINTI, and RIABNI.

Key: ASP – average sales price; Bio – biosimilar; FDA – Food and Drug Administration; RP – reference product; WAC – wholesale acquisition cost.

*GRANIX is not a biosimilar. It was approved under a stand-alone Biologics License Application, which was submitted to the FDA before the enactment of the biosimilar approval pathway.

Source: AnalySource.

BIOSIMILAR UPTAKE IS ACCELERATING

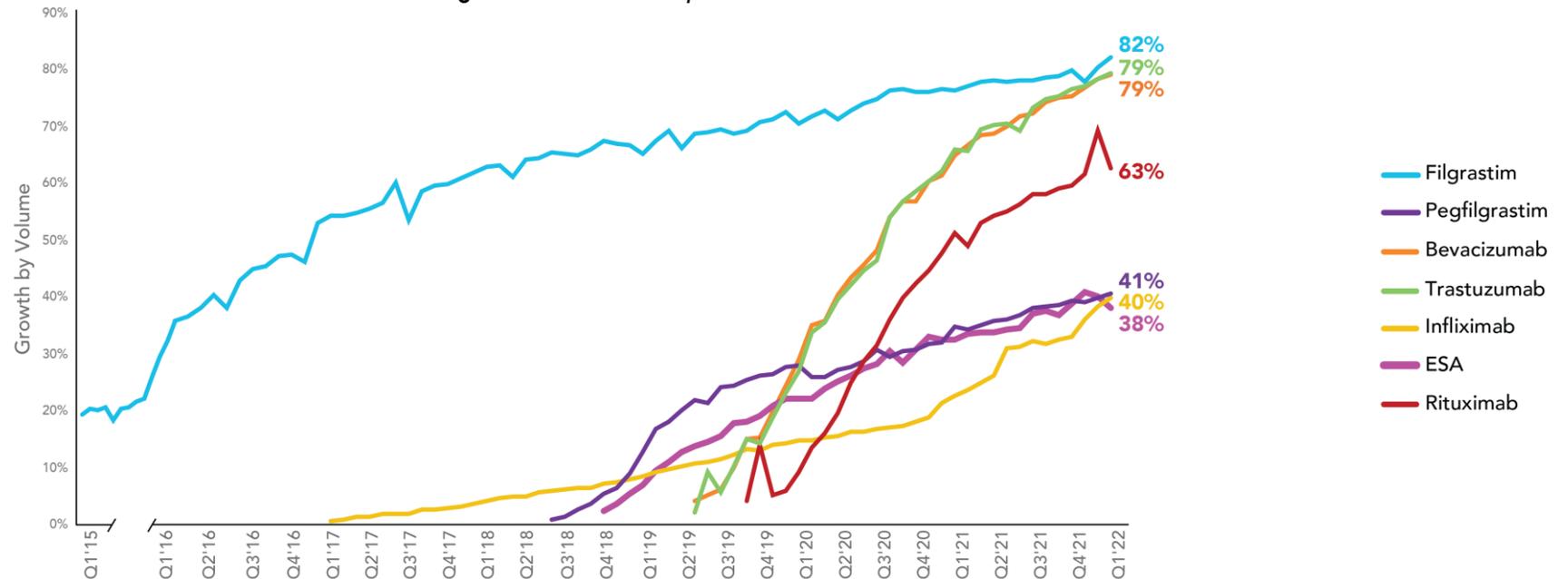


The rate of biosimilar uptake is generally increasing over time, as depicted in **Figure 6**. Biosimilars have gained significant share in the majority of therapeutic areas where they have been introduced. Additionally, first-to-launch biosimilars tend to capture a greater portion of the segment compared to later entrants.

For therapeutic areas with biosimilars launched in the last 3 years, the average share was 74%.

For therapeutic areas with biosimilars launched prior to 2019, the average share after 3 years was 38%.

Figure 6. Biosimilars Uptake Curve¹⁰



Key: ESA – erythropoiesis-stimulating agent.

Source: OBU Customer Data Pack Weekly (IQVIA DDD + Chargeback).

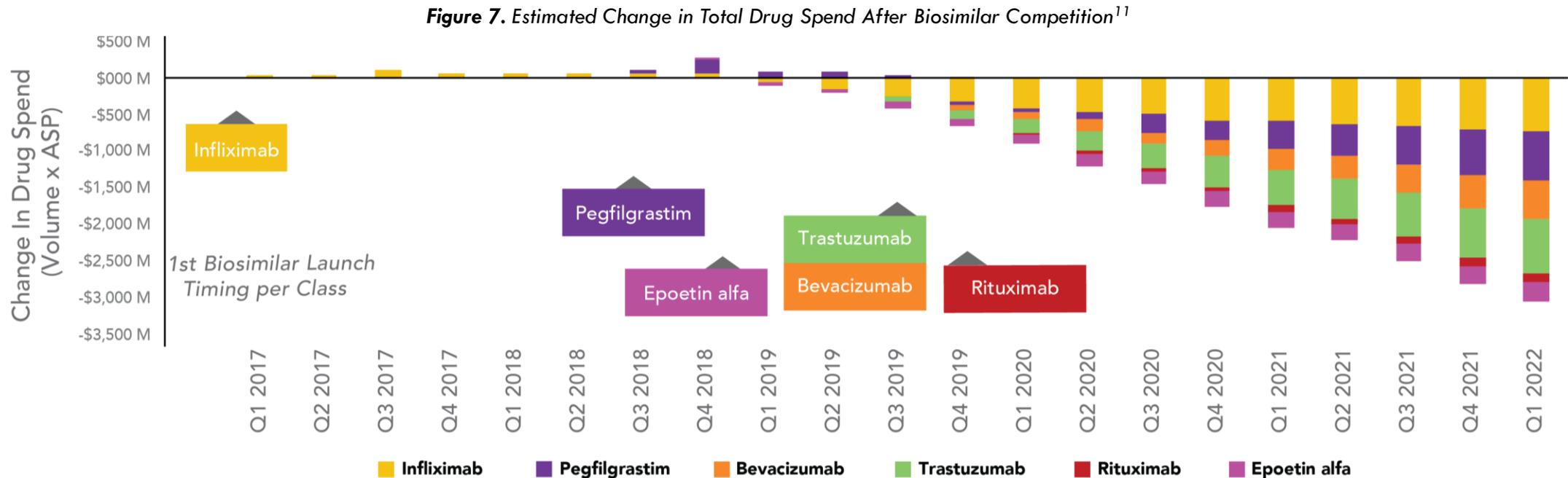
BIOSIMILAR COMPETITION APPEARS TO BE CONTRIBUTING TO DECREASED DRUG SPENDING



Figure 7 shows the estimated decrease in total drug spend after biosimilar competition was introduced. Change in drug spend shown is the delta between the projected reference product spend (based on historical trend) vs the actual spend following biosimilar launch. Beginning in Q1 2019, drug spending for most classes continues to decrease.

The cumulative savings in drug spend for classes with biosimilar competition is estimated to have been \$18 billion over the past 6 years.

Trends show an increase in savings per quarter, and in Q1 2022 alone, savings in drug spend are estimated to be \$3 billion.



Key: ASP – average sales price.

Note: Filgrastim is excluded from figure because the first biosimilar in its class was launched in 2013 and data are not available prior to Q2 2016 for normalized units.

The quarterly drug spend for each product is estimated as: Drug spend=ASPxNormalized unit volume. The estimated spend for the reference product (after biosimilar launch) is trended out based on historical spend for the reference product before biosimilar launch.

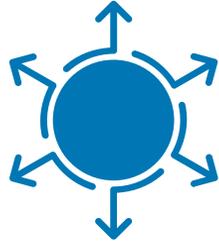
Sources: AnalySource, Integrated Weekly Sales Data (IQVIA DDD + Chargeback).

THE FUTURE OF BIOSIMILARS



Biosimilars are expanding into new areas

Over the next few years, the growing number of biosimilars will likely lead to a rapid evolution in the US biosimilars marketplace, including:



Expansion of biosimilars into pharmacy benefit reimbursement



Biosimilars in more therapeutic areas (autoimmune, oncology, endocrinology)



Approval of additional interchangeable biosimilars in the US



Focus on provider education and comfort with prescribing and using biosimilars



Use of market and regulatory trends outside the US



Use of real-world evidence to inform the future of the marketplace

These changes are likely to cement the role of biosimilars as viable and integral US treatment options. Biosimilars will find new audiences in different prescriber specialties, pharmacists, payers, and patients. These developments may change the patient support program landscape, interactions at the pharmacy counter, and product-administration devices.

THANK YOU

For more information:



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BOX WARNING INFORMATION

BOXED WARNINGS

AVSOLA®

- **WARNING: SERIOUS INFECTIONS and MALIGNANCY**
- See full [Prescribing Information](#) for complete boxed warning.

-
- Increased risk of serious infections leading to hospitalization or death, including tuberculosis (TB), bacterial sepsis, invasive fungal infections (such as histoplasmosis) and infections due to other opportunistic pathogens. (5.1)
- Discontinue AVSOLA if a patient develops a serious infection.
- Perform test for latent TB; if positive, start treatment for TB prior to starting AVSOLA. Monitor all patients for active TB during treatment, even if initial latent TB test is negative. (5.1)
- Lymphoma and other malignancies, some fatal, have been reported in children and adolescent patients treated with tumor necrosis factor (TNF) blockers, including infliximab products. (5.2)
- Postmarketing cases of fatal hepatosplenic T-cell lymphoma (HSTCL) have been reported in patients treated with TNF blockers including infliximab products. Almost all had received azathioprine or 6-mercaptopurine concomitantly with a TNF blocker at or prior to diagnosis. The majority of cases were reported in patients with Crohn's disease or ulcerative colitis, most of whom were adolescent or young adult males. (5.2)

BOXED WARNINGS (cont.)

EPOGEN®

- **WARNING: ESAs INCREASE THE RISK OF DEATH, MYOCARDIAL INFARCTION, STROKE, VENOUS THROMBOEMBOLISM, THROMBOSIS OF VASCULAR ACCESS AND TUMOR PROGRESSION OR RECURRENCE**

- See full [Prescribing Information](#) for complete boxed warning.

- **Chronic Kidney Disease:**

- • In controlled trials, patients experienced greater risks for death, serious adverse cardiovascular reactions, and stroke when administered erythropoiesis-stimulating agents (ESAs) to target a hemoglobin level of greater than 11 g/dL (5.1).
- • No trial has identified a hemoglobin target level, ESA dose, or dosing strategy that does not increase these risks (2.2).
- • Use the lowest Epopen dose sufficient to reduce the need for red blood cell (RBC) transfusions (5.1).

- **Cancer:**

- • ESAs shortened overall survival and/or increased the risk of tumor progression or recurrence in clinical studies of patients with breast, non-small cell lung, head and neck, lymphoid, and cervical cancers (5.2).
- • Use the lowest dose to avoid RBC transfusions (2.4).
- • Use ESAs only for anemia from myelosuppressive chemotherapy (1.3).
- • ESAs are not indicated for patients receiving myelosuppressive chemotherapy when the anticipated outcome is cure (1.5).
- • Discontinue following the completion of a chemotherapy course (2.4).

- **Perisurgery:**

- • Due to increased risk of Deep Venous Thrombosis (DVT), DVT prophylaxis is recommended (5.1).

BOXED WARNINGS (cont.)

ENBREL®

- **WARNINGS: SERIOUS INFECTIONS AND MALIGNANCIES**
- See full [Prescribing Information](#) for complete boxed warning.

- **SERIOUS INFECTIONS**

- Increased risk of serious infections leading to hospitalization or death, including tuberculosis (TB), bacterial sepsis, invasive fungal infections (such as histoplasmosis), and infections due to other opportunistic pathogens. (5.1)
- Enbrel should be discontinued if a patient develops a serious infection or sepsis during treatment. (5.1)
- Perform test for latent TB; if positive, start treatment for TB prior to starting Enbrel. (5.1)
- Monitor all patients for active TB during treatment, even if initial latent TB test is negative. (5.1)

- **MALIGNANCIES**

- Lymphoma and other malignancies, some fatal, have been reported in children and adolescent patients treated with TNF blockers, including Enbrel. (5.3)

BOXED WARNINGS (cont.)

KANJINTI®

- **WARNING: CARDIOMYOPATHY, INFUSION REACTIONS, EMBRYO-FETAL TOXICITY, and PULMONARY TOXICITY**

- See full [Prescribing Information](#) for complete boxed warning.

- Cardiomyopathy: Trastuzumab products can result in subclinical and clinical cardiac failure manifesting as CHF, and decreased LVEF, with greatest risk when administered concurrently with anthracyclines. Evaluate cardiac function prior to and during treatment. Discontinue KANJINTI for cardiomyopathy. (2.3, 5.1)
- Infusion Reactions, Pulmonary Toxicity: Discontinue KANJINTI for anaphylaxis, angioedema, interstitial pneumonitis, or acute respiratory distress syndrome. (5.2, 5.4)
- Embryo-Fetal Toxicity: Exposure to trastuzumab products during pregnancy can result in oligohydramnios, in some cases complicated by pulmonary hypoplasia and neonatal death. Advise patients of these risks and the need for effective contraception. (5.3, 8.1, 8.3)

RIABNI™

WARNING: FATAL INFUSION-RELATED REACTIONS, SEVERE MUCOCUTANEOUS REACTIONS, HEPATITIS B VIRUS REACTIVATION and PROGRESSIVE MULTIFOCAL LEUKOENCEPHALOPATHY

See full [Prescribing Information](#) for complete boxed warning.

- Fatal infusion-related reactions within 24 hours of rituximab infusion; approximately 80% of fatal reactions occurred with first infusion. Monitor patients and discontinue RIABNI infusion for severe reactions (5.1).
- Severe mucocutaneous reactions, some with fatal outcomes (5.2).
- Hepatitis B virus (HBV) reactivation, in some cases resulting in fulminant hepatitis, hepatic failure, and death (5.3).
- Progressive multifocal leukoencephalopathy (PML) resulting in death (5.4).