

**Carta Trámite**

20 de julio de 2021

A: Todos los Proveedores Contratados por First Medical Health Plan, Inc. para el Plan Vital, Región Única y Población Vital-X (Virtual)

**Re: Carta Normativa 21-0719 relacionada a Guía Clínica para la Administración de Sotrovimab, a tenor con la Autorización de uso de Emergencia 100 (Emergency use Authorization-EUA 100) de 26 de mayo de 2021**

Estimado(a) Proveedor(a):

Reciba un cordial saludo de parte de First Medical Health Plan, Inc., (FMHP).

Adjunto a este comunicado encontrará la Carta Normativa 21-0719 de la Administración de Seguros de Salud de Puerto Rico (ASES).

A través de esta Carta Normativa, la ASES informa sobre la autorización emitida por la Administración de Drogas y Alimentos (FDA, por sus siglas en inglés), ante el Uso en Emergencia o *Emergency Use Authorization* (EUA) del medicamento **Sotrovimab**.

El Centro de Medicare y Medicaid (CMS, con sus siglas en inglés), estableció la siguiente codificación para los productos o medicamentos de anticuerpos monoclonales y su administración:

Code	CPT Short Descriptor	Labeler Name	Vaccine/ Procedure Name
Q0247	Sotrovimab	GSK	Injection, Sotrovimab, 500mg
M0247	Sotrovimab Infusion	GSK	Intravenous infusion, Sotrovimab, includes infusion and post administration monitoring
M0248	Sotrovimab Inf, home admin	GSK	Intravenous infusion, Sotrovimab, includes infusion and post administration monitoring in the home or residence, this includes a beneficiary's home that has been made provider- based to the hospital during the COVID-19 public health emergency.

La ASES indica que, al tratarse de un medicamento bajo investigación, la FDA no ha aprobado su uso para ninguna indicación. Para referencia se incluye el *Emergency Use Authorization* (EUA), del medicamento **Sotrovimab**.

Para detalles específicos sobre la información provista por la ASES, le exhortamos a leer detenidamente la Carta Normativa 21-0719.

Si usted tiene alguna pregunta relacionada a este comunicado y/o necesita información adicional, siéntase en la libertad de comunicarse con nuestro Centro de Servicio al Proveedor al número libre de cargos 1-844-347-7802 de lunes a viernes de 7:00 a.m. a 7:00 p.m. También, puede acceder a [www.firstmedicalvital.com](http://www.firstmedicalvital.com).

Cordialmente,

Departamento de Cumplimiento  
First Medical Health Plan, Inc.



## CARTA NORMATIVA 21-0719

19 de julio de 2021

- A:** ORGANIZACIONES DE MANEJO DE CUIDADO DIRIGIDO, GRUPOS MÉDICOS, MÉDICOS PRIMARIOS, FARMACIAS, Y PROVEEDORES PARTICIPANTES DEL PLAN DE SALUD DEL GOBIERNO (PSG) - PLAN VITAL
- RE:** GUIA CLÍNICA PARA LA ADMINISTRACIÓN DE *SOTROVIMAB*, A TENOR CON LA AUTORIZACIÓN DE USO EN EMERGENCIA 100 (*EMERGENCY USE AUTHORIZATION- EUA 100*) DE 26 DE MAYO DE 2021

El 26 de mayo de 2021, la Administración de Drogas y Alimentos (*FDA, por sus siglas en inglés*), emitió una Autorización de Uso en Emergencia, o *Emergency Use Authorization* (EUA), para el medicamento ***Sotrovimab***. El *Sotrovimab* es un anticuerpo monoclonal humano IgG(k) producido bajo el mecanismo de recombinación que se une a una proteína que se encuentra en los receptores proteicos de la espiga del virus de SARS-CoV-2. *Sotrovimab* no compite con los receptores humanos ACE2. Al tratarse de un medicamento bajo investigación, la FDA no ha aprobado su uso para ninguna indicación.

### INDICACIONES

- Pacientes adultos y pediátricos de 12 años o más, con un peso de 88 libras o más (40 kg.),
- tener una prueba viral para COVID-19 positiva,
- manifestaciones de la enfermedad leve a moderada, y
- ser pacientes de alto riesgo de progresar a una forma severa de la enfermedad que requiera hospitalización.

### LIMITACIONES DE USO

**No está autorizado su uso en pacientes:**

- que se encuentren hospitalizados,
- que requieran oxígeno suplementario,
- que requieran uso de oxígeno basal suplementario por condiciones comórbidas y no relacionadas al COVID-19.

Esta autorización de uso bajo EUA solamente estará vigente mientras dure el período de emergencia decretado por el presidente de los Estados Unidos.

El alto riesgo de progresión de la enfermedad COVID-19 a severa y/o requerir hospitalización se define para aquellos pacientes que cumplan al menos uno (1) de los siguientes criterios, según el EUA:

- Obesidad o sobrepeso (por ejemplo, adultos con un BMI mayor de 25kg/m<sup>2</sup> o si es de 12-17 años un BMI igual o mayor al 85 percentil para su edad y sexo, según las tablas de crecimiento del CDC).
- Padecen de enfermedad renal crónica.
- Diabetes Mellitus
- Presentan alguna condición o enfermedad inmunosupresora.
- Se encuentran en tratamiento con medicamentos inmunosupresores.
- 65 años o más de edad.
- Pacientes de 55 años o más y que además presentan enfermedad cardiovascular, incluyendo Hipertensión, y/o enfermedad pulmonar obstructiva crónica u otra condición respiratoria.
- Drepanocitosis (*sickle cell disease*).
- Enfermedad cardíaca congénita o adquirida.
- Trastorno del desarrollo neural.
- Dependencia de tecnología por condiciones médicas (traqueostomía, gastrostomía o dependiente de ventilación asistida no causada por enfermedad del COVID-19).
- Asma o condición pulmonar crónica que requiera el uso diario de medicamentos para su control.
- Embarazo

## DOSIS

La dosis del *Sotrovimab* para el tratamiento de COVID-19 de leve a moderado, tanto para adultos o niños de 12 años o más y que pesen al menos 40 Kg. (88 lb.) es:

- 500 mg de *Sotrovimab*, diluido y administrado como una infusión intravenosa de una sola vez en 30 minutos.
- Debe de ser administrado lo antes posible, después de tener un resultado positivo de prueba viral para-SARS-CoV-2, y dentro de los primeros 10 días.

## ADMINISTRACIÓN

Vía Intravenosa, diluida en 30 minutos. **NO SE PUEDE ADMINISTRAR COMO BOLO IV o IV PUSH.**

*Sotrovimab* sólo puede administrarse en entornos en que los proveedores de atención médica tengan acceso inmediato a medicamentos para tratar una reacción grave a la infusión, como anafilaxia, y la capacidad de activar el sistema médico de emergencia (EMS).

El Centro de Medicare y Medicaid (CMS, con sus siglas en inglés) estableció la siguiente codificación para los productos o medicamentos de anticuerpos monoclonales y su administración:

Code	CPT Short Descriptor	Labeler Name	Vaccine / Procedure Name
Q0247	Sotrovimab	GSK	Injection, sotrovimab, 500mg
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La ASES requiere a todas las aseguradoras contratadas bajo el Plan de Salud del Gobierno – Plan Vital, diseminar esta información en todos los foros aplicables. Igualmente, en todas las aseguradoras recae la responsabilidad de orientar debidamente a sus proveedores para que se cumpla fielmente con las guías clínicas para la administración del medicamento *Sotrovimab*, según establecidas en esta Carta Normativa.

Para más información se recomienda acceder los siguientes enlaces:

<http://www.covid19treatmentguidelines.nih.gov/>

<http://www.sotrovimabinfo.com/>

La ASES cuenta con ustedes para brindar a nuestros beneficiarios acceso al tratamiento adecuado, ya sea que estén hospitalizados, o evitando su progresión a estadios graves.

Cordialmente,



Madeline Figueroa Rivera, JD, MA  
Directora Ejecutiva Interina

**FACT SHEET FOR HEALTHCARE PROVIDERS  
EMERGENCY USE AUTHORIZATION (EUA) OF SOTROVIMAB**

**AUTHORIZED USE**

The U.S. Food and Drug Administration (FDA) has issued an Emergency Use Authorization (EUA) to permit the emergency use of the unapproved product sotrovimab for the treatment of mild-to-moderate coronavirus disease 2019 (COVID-19) in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and who are at high risk for progression to severe COVID-19, including hospitalization or death.

**LIMITATIONS OF AUTHORIZED USE**

- Sotrovimab is not authorized for use in patients:
  - who are hospitalized due to COVID-19, OR
  - who require oxygen therapy due to COVID-19, OR
  - who require an increase in baseline oxygen flow rate due to COVID-19 (in those on chronic oxygen therapy due to underlying non-COVID-19 related comorbidity).
- Benefit of treatment with sotrovimab has not been observed in patients hospitalized due to COVID-19. SARS-CoV-2 monoclonal antibodies may be associated with worse clinical outcomes when administered to hospitalized patients with COVID-19 requiring high flow oxygen or mechanical ventilation.

Sotrovimab has been authorized by FDA for the emergency use described above.

Sotrovimab is not FDA-approved for this use.

Sotrovimab is authorized only for the duration of the declaration that circumstances exist justifying the authorization of the emergency use of sotrovimab under section 564(b)(1) of the Act, 21 U.S.C. § 360bbb-3(b)(1), unless the authorization is terminated or revoked sooner.

**This EUA is for the use of the unapproved product sotrovimab for the treatment of mild-to-moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-COV-2 viral testing, and who are at high risk for progression to severe COVID-19, including hospitalization or death [see *Limitations of Authorized Use*].**

The following medical conditions or other factors may place adults and pediatric patients (12 to 17 years of age weighing at least 40 kg) at higher risk for progression to severe COVID-19:

- Older age (for example  $\geq 65$  years of age)
- Obesity or being overweight (for example, adults with BMI  $>25$  kg/m<sup>2</sup>, or if 12 to 17 years

of age, have BMI  $\geq$ 85th percentile for their age and gender based on CDC growth charts, [https://www.cdc.gov/growthcharts/clinical\\_charts.htm](https://www.cdc.gov/growthcharts/clinical_charts.htm))

- Pregnancy
- Chronic kidney disease
- Diabetes
- Immunosuppressive disease or immunosuppressive treatment
- Cardiovascular disease (including congenital heart disease) or hypertension
- Chronic lung diseases (for example, chronic obstructive pulmonary disease, asthma [moderate-to-severe], interstitial lung disease, cystic fibrosis and pulmonary hypertension)
- Sickle cell disease
- Neurodevelopmental disorders (for example, cerebral palsy) or other conditions that confer medical complexity (for example, genetic or metabolic syndromes and severe congenital anomalies)
- Having a medical-related technological dependence (for example, tracheostomy, gastrostomy, or positive pressure ventilation [not related to COVID 19])

Other medical conditions or factors (for example, race or ethnicity) may also place individual patients at high risk for progression to severe COVID-19, and authorization of sotrovimab under the EUA is not limited to the medical conditions or factors listed above. For additional information on medical conditions and factors associated with increased risk for progression to severe COVID-19, see the CDC website: <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html>. Healthcare providers should consider the benefit-risk for an individual patient.

Circulating SARS-CoV-2 viral variants may be associated with resistance to monoclonal antibodies. Healthcare providers should review the Antiviral Resistance information in Section 15 of this Fact Sheet for details regarding specific variants and resistance, and refer to the CDC website (<https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/variant-proportions.html>) as well as information from state and local health authorities regarding reports of viral variants of importance in their region to guide treatment decisions.

Sotrovimab may only be administered in settings in which healthcare providers have immediate access to medications to treat a severe infusion reaction, such as anaphylaxis, and the ability to activate the emergency medical system (EMS), as necessary.

**Sotrovimab must be administered after dilution by intravenous (IV) infusion.**

Healthcare providers must submit a report on all medication errors and **ALL SERIOUS ADVERSE EVENTS** potentially related to sotrovimab. See Sections 8 and 9 of the Full EUA

Prescribing Information for reporting instructions below.

- See the Full EUA Prescribing Information for complete dosage, administration, and preparation instructions.
- The authorized dosage for sotrovimab is one single IV infusion of 500 mg administered as soon as possible after a positive viral test for SARS-CoV-2 and within 10 days of symptom onset [*see Dosage and Administration (2.2) and Clinical Trial Results and Supporting Data for EUA (18)*].
- Sotrovimab is available as a concentrated solution and must be diluted prior to administration.
- Administer 500 mg of sotrovimab by IV infusion over 30 minutes.
- Clinically monitor patients during infusion and observe patients for at least 1 hour after infusion is complete.
- Patients treated with sotrovimab should continue to self-isolate and use infection control measures (e.g., wear mask, isolate, social distance, avoid sharing personal items, clean and disinfect “high touch” surfaces, and frequent handwashing) according to CDC guidelines.

The authorized dosage may be updated as additional data from clinical trials becomes available.

For information on clinical trials that are testing the use of sotrovimab in COVID-19, please see [www.clinicaltrials.gov](http://www.clinicaltrials.gov).

## **Contraindications**

None.

## **Dosing**

### Patient Selection and Treatment Initiation

This section provides essential information on the unapproved product sotrovimab, for the treatment of mild-to-moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and who are at high risk for progression to severe COVID-19, including hospitalization or death [*see Limitations of Authorized Use*].

The following medical conditions or other factors may place adults and pediatric patients (12 to 17 years of age weighing at least 40 kg) at higher risk for progression to severe COVID-19:

- Older age (for example  $\geq 65$  years of age)
- Obesity or being overweight (for example, adults with BMI  $> 25$  kg/m<sup>2</sup>, or if 12 to 17 years of age, have BMI  $\geq 85$ th percentile for their age and gender based on CDC growth charts, [https://www.cdc.gov/growthcharts/clinical\\_charts.htm](https://www.cdc.gov/growthcharts/clinical_charts.htm))

- Pregnancy
- Chronic kidney disease
- Diabetes
- Immunosuppressive disease or immunosuppressive treatment
- Cardiovascular disease (including congenital heart disease) or hypertension
- Chronic lung diseases (for example, chronic obstructive pulmonary disease, asthma [moderate-to-severe], interstitial lung disease, cystic fibrosis, and pulmonary hypertension)
- Sickle cell disease
- Neurodevelopmental disorders (for example, cerebral palsy) or other conditions that confer medical complexity (for example, genetic or metabolic syndromes and severe congenital anomalies)
- Having a medical-related technological dependence (for example, tracheostomy, gastrostomy, or positive pressure ventilation [not related to COVID 19])

Other medical conditions or factors (for example, race or ethnicity) may also place individual patients at high risk for progression to severe COVID-19, and authorization of sotrovimab under the EUA is not limited to the medical conditions or factors listed above. For additional information on medical conditions and factors associated with increased risk for progression to severe COVID-19, see the CDC website: <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html>. Healthcare providers should consider the benefit-risk for an individual patient.

### Dosage

The dosage of sotrovimab for the treatment of mild-to-moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) is 500 mg of sotrovimab. Sotrovimab should be given as soon as possible after positive results of direct SARS-CoV-2 viral testing and within 10 days of symptom onset. Sotrovimab must be diluted and administered as a single intravenous infusion over 30 minutes.

### Dosage Adjustment in Specific Populations

No dosage adjustment is recommended based on renal impairment, during pregnancy or while lactating [see Full EUA Prescribing Information, Use in Specific Populations (11)].

### **Preparation and Administration**

#### Preparation

Sotrovimab is supplied in a single-dose vial and must be diluted prior to administration.

Sotrovimab injection should be prepared by a qualified healthcare professional using aseptic technique.

- Gather the materials for preparation:
  - Polyvinyl chloride (PVC) or polyolefin (PO), sterile, prefilled infusion bag. Choose one of the following sizes: prefilled 50-mL or 100-mL infusion bag containing 0.9% Sodium Chloride Injection, and
  - One vial of sotrovimab (500 mg/8 mL).
- Remove one vial of sotrovimab from refrigerated storage and allow to equilibrate to room temperature, protected from light, for approximately 15 minutes.
- Inspect the vial of sotrovimab visually for particulate matter and discoloration prior to administration. Should either be observed, the solution must be discarded and a fresh solution prepared. Sotrovimab is a clear, colorless or yellow to brown solution.
- Gently swirl the vial several times before use without creating air bubbles. **Do not shake the vial.**
- Withdraw 8 mL of sotrovimab from one vial and inject into the prefilled infusion bag containing 0.9% Sodium Chloride Injection.
- Discard any product remaining in the vial.
- Prior to the infusion, gently rock the infusion bag back and forth by hand 3 to 5 times. **Do not invert the infusion bag.** Avoid forming air bubbles.
- This product is preservative-free; therefore, the diluted infusion solution should be administered immediately. If immediate administration is not possible, store the diluted solution of sotrovimab up to 4 hours at room temperature (20°C to 25°C [68°F to 77°F]) or refrigerated up to 24 hours (2°C to 8°C [36°F to 46°F]).

#### Administration

Sotrovimab infusion solution should be administered by a qualified healthcare professional.

- Gather the materials for infusion:
  - Polyvinyl chloride (PVC) or polyolefin (PO) infusion set, and
  - Use of a 0.2 micron polyethersulfone (PES) filter is strongly recommended.
- Attach the infusion set to the IV bag using standard bore tubing.
- Prime the infusion set.
- Administer the entire infusion solution in the bag over 30 minutes. Due to potential overflow of prefilled saline bags, the entire infusion solution in the bag should be administered to avoid underdosage.
- Do not administer as an IV push or bolus.
- The prepared infusion solution should not be administered simultaneously with any other

medication. The compatibility of sotrovimab with IV solutions and medications other than 0.9% Sodium Chloride Injection is not known.

- Once infusion is complete, **flush the tubing** with 0.9% Sodium Chloride to ensure delivery of the required dose.
- If the infusion must be discontinued due to an infusion reaction, discard unused product.
- Clinically monitor patients during infusion and observe patients for at least 1 hour after infusion is complete.

### **Storage**

Refrigerate unopened vials at 2°C to 8°C (36°F to 46°F) in original carton. Do not freeze or shake. Protect from light.

### **Warnings**

There are limited clinical data available for sotrovimab. Serious and unexpected adverse events may occur that have not been previously reported with use of sotrovimab.

#### Hypersensitivity Including Anaphylaxis and Infusion-Related Reactions

Serious hypersensitivity reactions, including anaphylaxis, have been observed with administration of sotrovimab [see *Full EUA Prescribing Information, Overall Safety Summary (6.1)*]. If signs and symptoms of a clinically significant hypersensitivity reaction or anaphylaxis occur, immediately discontinue administration and initiate appropriate medications and/or supportive care.

Infusion-related reactions, occurring during the infusion and up to 24 hours after the infusion, have been observed with administration of sotrovimab. These reactions may be severe or life threatening.

Signs and symptoms of infusion-related reactions may include:

- fever, difficulty breathing, reduced oxygen saturation, chills, fatigue, arrhythmia (e.g., atrial fibrillation, sinus tachycardia, bradycardia), chest pain or discomfort, weakness, altered mental status, nausea, headache, bronchospasm, hypotension, hypertension, angioedema, throat irritation, rash including urticaria, pruritus, myalgia, vaso-vagal reactions (e.g., pre-syncope, syncope), dizziness, and diaphoresis.

Consider slowing or stopping the infusion and administer appropriate medications and/or supportive care if an infusion-related reaction occurs.

Hypersensitivity reactions occurring more than 24 hours after the infusion have also been reported with the use of SARS-CoV-2 monoclonal antibodies under Emergency Use Authorization.

### Clinical Worsening After SARS-CoV-2 Monoclonal Antibody Administration

Clinical worsening of COVID-19 after administration of SARS-CoV-2 monoclonal antibody treatment has been reported and may include signs or symptoms of fever, hypoxia or increased respiratory difficulty, arrhythmia (e.g., atrial fibrillation, tachycardia, bradycardia), fatigue, and altered mental status. Some of these events required hospitalization. It is not known if these events were related to SARS-CoV-2 monoclonal antibody use or were due to progression of COVID-19.

### Limitations of Benefit and Potential for Risk in Patients with Severe COVID-19

Benefit of treatment with sotrovimab has not been observed in patients hospitalized due to COVID-19. SARS-CoV-2 monoclonal antibodies may be associated with worse clinical outcomes when administered to hospitalized patients with COVID-19 requiring high flow oxygen or mechanical ventilation. Therefore, sotrovimab is not authorized for use in patients *[see Limitations of Authorized Use]*:

- who are hospitalized due to COVID-19, OR
- who require oxygen therapy due to COVID-19, OR
- who require an increase in baseline oxygen flow rate due to COVID-19 (in those on chronic oxygen therapy due to underlying non-COVID-19 related comorbidity).

### **Side Effects**

Adverse events have been reported with sotrovimab *[see Full EUA Prescribing Information, Overall Safety Summary (6.1)]*.

Additional adverse events associated with sotrovimab may become apparent with more widespread use.

### **INSTRUCTIONS FOR HEALTHCARE PROVIDERS**

As the healthcare provider, you must communicate to your patient or parent/caregiver, as age appropriate, information consistent with the “Fact Sheet for Patients, Parents, and Caregivers” (and provide a copy of the Fact Sheet) prior to the patient receiving sotrovimab, including:

- FDA has authorized the emergency use of sotrovimab for treatment of mild-to-moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and who are at high risk for progression to severe COVID-19, including hospitalization or death *[see Limitations of Authorized Use]*.
- The patient or parent/caregiver has the option to accept or refuse sotrovimab.
- The significant known and potential risks and benefits of sotrovimab and the extent to which such risks and benefits are unknown.

- Information on available alternative treatments and the risks and benefits of those alternatives, including clinical trials.
- Patients treated with sotrovimab should continue to self-isolate and use infection control measures (e.g., wear mask, isolate, social distance, avoid sharing personal items, clean and disinfect “high touch” surfaces, and frequent handwashing) according to CDC guidelines.

For information on clinical trials that are testing the use of sotrovimab for COVID-19, please see [www.clinicaltrials.gov](http://www.clinicaltrials.gov).

## **MANDATORY REQUIREMENTS FOR ADMINISTRATION OF SOTROVIMAB UNDER EMERGENCY USE AUTHORIZATION**

In order to mitigate the risks of using this unapproved product under the EUA and to optimize the potential benefit of sotrovimab, the following steps are required. Use of sotrovimab under this EUA is limited to the following (all requirements **must** be met):

1. Treatment of mild-to-moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and who are at high risk for progression to severe COVID-19, including hospitalization or death [*see Limitations of Authorized Use*].
2. As the healthcare provider, communicate to your patient or parent/caregiver information consistent with the “Fact Sheet for Patients, Parents, and Caregivers” prior to the patient receiving sotrovimab. Healthcare providers (to the extent practicable given the circumstances of the emergency) must document in the patient’s medical record that the patient/caregiver has been:
  - a. Given the “Fact Sheet for Patients, Parents, and Caregivers”,
  - b. Informed of alternatives to receiving authorized sotrovimab, and
  - c. Informed that sotrovimab is an unapproved drug that is authorized for use under this Emergency Use Authorization.
3. Patients with known hypersensitivity to any ingredient of sotrovimab must not receive sotrovimab.
4. The prescribing healthcare provider and/or the provider’s designee is/are responsible for mandatory reporting of all medication errors and serious adverse events\* potentially related to sotrovimab within 7 calendar days from the onset of the event. The reports should include unique identifiers and the words “Sotrovimab use for COVID-19 under Emergency Use Authorization (EUA)” in the description section of the report.
  - Submit adverse event reports to FDA MedWatch using one of the following methods:
    - Complete and submit the report online at [www.fda.gov/medwatch/report.htm](http://www.fda.gov/medwatch/report.htm), or

- Complete and submit a postage-paid FDA Form 3500 (<https://www.fda.gov/media/76299/download>) and return by:
  - Mail to MedWatch, 5600 Fishers Lane, Rockville, MD 20852-9787, or
  - Fax (1-800-FDA-0178), or
- Call 1-800-FDA-1088 to request a reporting form.
- Submitted reports should include in the field name, “Describe Event, Problem, or Product Use/Medication Error” the statement “Sotrovimab use for COVID-19 under Emergency Use Authorization (EUA).”

\*Serious Adverse Events are defined as:

- death;
  - a life-threatening adverse event;
  - inpatient hospitalization or prolongation of existing hospitalization;
  - a persistent or significant incapacity or substantial disruption of the ability to conduct normal life functions;
  - a congenital anomaly/birth defect;
  - a medical or surgical intervention to prevent death, a life-threatening event, hospitalization, disability, or congenital anomaly.
5. The prescribing healthcare provider and/or the provider’s designee is/are responsible for mandatory responses to requests from FDA for information about adverse events and medication errors following receipt of sotrovimab.

#### 6. OTHER REPORTING REQUIREMENTS

- In addition, please provide a copy of all FDA MedWatch forms to:

GlaxoSmithKline, Global Safety

Fax: 919-287-2902

Email: [WW.GSKAEReportingUS@gsk.com](mailto:WW.GSKAEReportingUS@gsk.com)

Or call the GSK COVID Contact Center at 1-866-GSK-COVID (866-475-2684) to report adverse events.

#### **APPROVED AVAILABLE ALTERNATIVES**

There is no adequate, approved and available alternative to sotrovimab for the treatment of mild-to-moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and who are at high risk for progression to severe COVID-19, including hospitalization or death. Additional information on COVID-19 treatments can be found at <http://www.covid19treatmentguidelines.nih.gov/>. The

healthcare provider should visit <https://clinicaltrials.gov/> to determine whether the patient may be eligible for enrollment in a clinical trial.

### **AUTHORITY FOR ISSUANCE OF THE EUA**

The Secretary of the Department of Health and Human Services (HHS) has declared a public health emergency that justifies the emergency use of drugs and biological products during the COVID-19 pandemic. In response, the FDA has issued this EUA, as requested by GlaxoSmithKline, for the unapproved product, sotrovimab, for the treatment of mild-to-moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-COV-2 viral testing, and who are at high risk for progression to severe COVID-19, including hospitalization or death.<sup>1</sup> As a healthcare provider, you must comply with the mandatory requirements of this EUA (see above).

Although limited scientific information is available, based on the totality of the scientific evidence available to date, it is reasonable to believe that sotrovimab may be effective for the treatment of mild-to-moderate COVID-19 in certain at-risk patients as specified in this Fact Sheet. You may be contacted and asked to provide information to help with the assessment of the use of the product during this emergency.

This EUA for sotrovimab will end when the Secretary determines that the circumstances justify the EUA no longer exist or when there is a change in the approval status of the product such that an EUA may no longer be needed.

### **CONTACT INFORMATION**

For additional information visit [www.sotrovimabinfo.com](http://www.sotrovimabinfo.com)

If you have questions, please call the GSK COVID Contact Center at 1-866-GSK-COVID (866-475-2684).

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**END SHORT VERSION FACT SHEET**

**Long Version Begins on Next Page**

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<sup>1</sup> The healthcare provider should visit <https://clinicaltrials.gov/> to determine whether there is an active clinical trial for the product in this disease/condition and whether enrollment of the patient(s) in a clinical trial is more appropriate than product use under this EUA.

## FULL EUA PRESCRIBING INFORMATION

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### FULL EUA PRESCRIBING INFORMATION: CONTENTS\*

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\*Sections or subsections omitted from the full prescribing information are not listed.

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## 1 AUTHORIZED USE

Sotrovimab is authorized for use under an Emergency Use Authorization (EUA) for the treatment of mild-to-moderate coronavirus disease 2019 (COVID-19) in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and who are at high risk for progression to severe COVID-19, including hospitalization or death [see *Clinical Trial Results and Supporting Data for EUA (18)*].

### LIMITATIONS OF AUTHORIZED USE

- Sotrovimab is not authorized for use in patients:
  - who are hospitalized due to COVID-19, OR
  - who require oxygen therapy due to COVID-19, OR
  - who require an increase in baseline oxygen flow rate due to COVID-19 (in those on chronic oxygen therapy due to underlying non-COVID-19 related comorbidity).
- Benefit of treatment with sotrovimab has not been observed in patients hospitalized due to COVID-19. SARS-CoV-2 monoclonal antibodies may be associated with worse clinical outcomes when administered to hospitalized patients with COVID-19 requiring high flow oxygen or mechanical ventilation [see *Warnings and Precautions (5.2)*].

## 2 DOSAGE AND ADMINISTRATION

### 2.1 Patient Selection

Sotrovimab should be administered as soon as possible after a positive viral test for SARS-CoV-2 and within 10 days of symptom onset in adults and pediatric patients (12 years of age and older weighing at least 40 kg) who are at high risk for progression to severe COVID-19, including hospitalization or death [see *Authorized Use (1) and Clinical Trial Results and Supporting Data for EUA (18)*].

The following medical conditions or other factors may place adults and pediatric patients (12 to 17 years of age weighing at least 40 kg) at higher risk for progression to severe COVID-19:

- Older age (for example,  $\geq 65$  years of age)
- Obesity or being overweight (for example, adults with BMI  $> 25$  kg/m<sup>2</sup>, or if 12 to 17, have BMI  $\geq 85$ th percentile for their age and gender based on CDC growth charts, [https://www.cdc.gov/growthcharts/clinical\\_charts.htm](https://www.cdc.gov/growthcharts/clinical_charts.htm))
- Pregnancy
- Chronic kidney disease
- Diabetes
- Immunosuppressive disease or immunosuppressive treatment
- Cardiovascular disease (including congenital heart disease) or hypertension
- Chronic lung diseases (for example, chronic obstructive pulmonary disease, asthma [moderate-to-severe], interstitial lung disease, cystic fibrosis, and pulmonary hypertension)
- Sickle cell disease
- Neurodevelopmental disorders (for example, cerebral palsy) or other conditions that confer medical complexity (for example, genetic or metabolic syndromes and severe congenital anomalies)
- Having a medical-related technological dependence (for example, tracheostomy, gastrostomy, or positive pressure ventilation [not related to COVID 19])

Other medical conditions or factors (for example, race or ethnicity) may also place individual patients at high risk for progression to severe COVID-19, and authorization of sotrovimab under the EUA is not limited to the medical conditions or factors listed above. For additional information on medical conditions and factors associated with increased risk for progression to severe COVID-19, see the CDC website: <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html>. Healthcare providers should consider the benefit-risk for an individual patient.

## 2.2 Dosage

The dosage of sotrovimab in adults and pediatric patients (12 years of age and older weighing at least 40 kg) is a single IV infusion of 500 mg. Sotrovimab should be given as soon as possible after positive results of direct SARS-CoV-2 viral testing and within 10 days of symptom onset. Sotrovimab must be diluted and administered as a single intravenous infusion over 30 minutes.

## 2.3 Dosage Adjustment in Specific Populations

### Pregnancy or Lactation

No dosage adjustment is recommended in pregnant or lactating women [*see Use in Specific Populations (11.1, 11.2)*].

### Pediatric Use

No dosage adjustment is recommended in pediatric patients who weigh at least 40 kg and are 12 years of age and older. Sotrovimab is not authorized for patients under 12 years of age or pediatric patients weighing less than 40 kg [*see Use in Specific Populations (11.3)*].

### Geriatric Use

No dosage adjustment is recommended in geriatric patients [*see Use in Specific Populations (11.4)*].

### Renal Impairment

No dosage adjustment is recommended in patients with renal impairment [*see Use in Specific Populations (11.5)*].

## 2.4 Dose Preparation and Administration

### Preparation

Sotrovimab is supplied in a single-dose vial and must be diluted prior to administration.

Sotrovimab injection should be prepared by a qualified healthcare professional using aseptic technique:

- Gather the materials for preparation:
  - Polyvinyl chloride (PVC) or polyolefin (PO), sterile prefilled infusion bag. Choose one of the following sizes: prefilled 50-mL or 100-mL infusion bag containing 0.9% Sodium Chloride Injection, and
  - One vial of sotrovimab (500 mg/8 mL).
- Remove one vial of sotrovimab from refrigerated storage and allow to equilibrate to room temperature, protected from light, for approximately 15 minutes.
- Inspect the vial of sotrovimab visually for particulate matter and discoloration prior to administration. Should either be observed, the solution must be discarded and fresh solution

prepared. Sotrovimab is a clear, colorless or yellow to brown solution.

- Gently swirl the vial several times before use without creating air bubbles. **Do not shake the vial.**
- Withdraw 8 mL of sotrovimab from one vial and inject into the prefilled infusion bag containing 0.9% Sodium Chloride Injection.
- Discard any product remaining in the vial.
- Prior to the infusion, gently rock the infusion bag back and forth by hand 3 to 5 times. **Do not invert the infusion bag.** Avoid forming air bubbles.
- This product is preservative-free; therefore, the diluted infusion solution should be administered immediately. If immediate administration is not possible, store the diluted solution of sotrovimab up to 4 hours at room temperature (20°C to 25°C [68°F to 77°F]) or refrigerated up to 24 hours (2°C to 8°C [36°F to 46°F]).

### Administration

Sotrovimab infusion solution should be administered by a qualified healthcare professional.

- Gather the materials for infusion:
  - Polyvinyl chloride (PVC) or polyolefin (PO) infusion set, and
  - Use of a 0.2 micron polyethersulfone (PES) filter is strongly recommended.
- Attach the infusion set to the IV bag using standard bore tubing.
- Prime the infusion set.
- Administer the entire infusion solution in the bag over 30 minutes. Due to potential overflow of prefilled saline bags, the entire infusion solution in the bag should be administered to avoid underdosage.
- Do not administer as an IV push or bolus.
- The prepared infusion solution should not be administered simultaneously with any other medication. The compatibility of sotrovimab with IV solutions and medications other than 0.9% Sodium Chloride Injection is not known.
- Once infusion is complete, **flush the tubing** with 0.9% Sodium Chloride to ensure delivery of the required dose.
- If the infusion must be discontinued due to an infusion reaction, discard unused product.
- Clinically monitor patients during infusion and observe patients for at least 1 hour after infusion is complete.

### Storage

This product is preservative-free; therefore, the diluted infusion solution should be administered

immediately. If immediate administration is not possible, store the diluted infusion solution for up to 24 hours at refrigerated temperature (2°C to 8°C [36°F to 46°F]) or up to 4 hours at room temperature (20°C to 25°C [68°F to 77°F]) including transportation and infusion time. If refrigerated, allow the infusion solution to equilibrate to room temperature for approximately 15 minutes prior to administration.

### **3 DOSAGE FORMS AND STRENGTHS**

Sotrovimab is a sterile, preservative-free, clear, colorless or yellow to brown solution available as:

- Injection: 500-mg/8-mL (62.5-mg/mL) solution in a single-dose vial for intravenous infusion after dilution.

### **4 CONTRAINDICATIONS**

None.

### **5 WARNINGS AND PRECAUTIONS**

There are limited clinical data available for sotrovimab. Serious and unexpected adverse events may occur that have not been previously reported with sotrovimab use.

#### **5.1 Hypersensitivity Including Anaphylaxis and Infusion-Related Reactions**

Serious hypersensitivity reactions, including anaphylaxis, have been observed with administration of sotrovimab [*see Overall Safety Summary (6.1)*]. If signs and symptoms of a clinically significant hypersensitivity reaction or anaphylaxis occur, immediately discontinue administration and initiate appropriate medications and/or supportive care.

Infusion-related reactions, occurring during the infusion and up to 24 hours after the infusion, have been observed with administration of sotrovimab. These reactions may be severe or life threatening.

Signs and symptoms of infusion-related reactions may include [*see Overall Safety Summary (6.1)*]:

- fever, difficulty breathing, reduced oxygen saturation, chills, fatigue, arrhythmia (e.g., atrial fibrillation, sinus tachycardia, bradycardia), chest pain or discomfort, weakness, altered mental status, nausea, headache, bronchospasm, hypotension, hypertension, angioedema, throat irritation, rash including urticaria, pruritus, myalgia, vaso-vagal reactions (e.g., pre-syncope, syncope), dizziness, and diaphoresis.

Consider slowing or stopping the infusion and administer appropriate medications and/or supportive care if an infusion related reaction occurs.

Hypersensitivity reactions occurring more than 24 hours after the infusion have also been reported with the use of SARS-CoV-2 monoclonal antibodies under Emergency Use

Authorization.

## **5.2 Clinical Worsening After SARS-CoV-2 Monoclonal Antibody Administration**

Clinical worsening of COVID-19 after administration of SARS-CoV-2 monoclonal antibody treatment has been reported and may include signs or symptoms of fever, hypoxia or increased respiratory difficulty, arrhythmia (e.g., atrial fibrillation, tachycardia, bradycardia), fatigue, and altered mental status. Some of these events required hospitalization. It is not known if these events were related to SARS-CoV-2 monoclonal antibody use or were due to progression of COVID-19.

## **5.3 Limitations of Benefit and Potential for Risk in Patients with Severe COVID-19**

Benefit of treatment with sotrovimab has not been observed in patients hospitalized due to COVID-19. SARS-CoV-2 monoclonal antibodies may be associated with worse clinical outcomes when administered to hospitalized patients with COVID-19 requiring high flow oxygen or mechanical ventilation. Therefore, sotrovimab is not authorized for use in patients [*see Limitations of Authorized Use*]:

- who are hospitalized due to COVID-19, OR
- who require oxygen therapy due to COVID-19, OR
- who require an increase in baseline oxygen flow rate due to COVID-19 in those on chronic oxygen therapy due to underlying non-COVID-19 related comorbidity.

# **6 OVERALL SAFETY SUMMARY**

## **6.1 Clinical Trials Experience**

The ongoing Phase 1/2/3 double-blind, placebo-controlled, randomized study enrolled 1,057 non-hospitalized patients with COVID-19 (COMET-ICE). The safety of sotrovimab is primarily based on an interim analysis from 868 patients through Day 15 [*see Clinical Trial Results and Supporting Data for EUA (18)*].

All patients received a single 500-mg infusion of sotrovimab (n = 430) or placebo (n = 438). Two patients experienced treatment interruptions due to infusion site extravasation; infusion was completed for each.

Infusion-related reactions, including immediate hypersensitivity reactions, have been observed in 1% of patients treated with sotrovimab and 1% of patients treated with placebo in COMET-ICE. Reported events that started within 24 hours of study treatment were pyrexia, chills, dizziness, dyspnea, pruritus, rash, and infusion-related reactions; all events were Grade 1 (mild) or Grade 2 (moderate).

One case of anaphylaxis was reported following sotrovimab infusion in a study in hospitalized patients; the infusion was immediately discontinued, and the patient received epinephrine. The event resolved but recurred within 2 hours; the patient received another dose of epinephrine and

improved with no additional reactions. Other serious infusion-related reactions (including immediate hypersensitivity reactions) reported following sotrovimab infusion in the hospitalized study included Grade 3 (serious) or Grade 4 (life-threatening) bronchospasm and shortness of breath. These events were also reported following infusion of placebo. Sotrovimab is not authorized for use in patients hospitalized due to COVID-19 [see *Warnings and Precautions (5.1, 5.3)*].

The most common treatment-emergent adverse events observed in the sotrovimab treatment group in COMET-ICE were rash (2%) and diarrhea (1%), all of which were Grade 1 (mild) or Grade 2 (moderate). No other treatment-emergent adverse events were reported at a higher rate with sotrovimab compared to placebo.

## **7 PATIENT MONITORING RECOMMENDATIONS**

Clinically monitor patients during infusion and observe patients for at least 1 hour after infusion is complete.

## **8 ADVERSE REACTIONS AND MEDICATION ERRORS REPORTING REQUIREMENTS AND INSTRUCTIONS**

Clinical trials evaluating the safety of sotrovimab are ongoing [see *Overall Safety Summary (6)*].

Completion of an FDA MedWatch Form to report all medication errors and serious adverse events\* occurring during sotrovimab use and considered to be potentially related to sotrovimab is mandatory and must be done by the prescribing healthcare provider and/or the provider's designee. These adverse events must be reported within 7 calendar days from the onset of the event:

\*Serious adverse events are defined as:

- death;
- a life-threatening adverse event;
- inpatient hospitalization or prolongation of existing hospitalization;
- a persistent or significant incapacity or substantial disruption of the ability to conduct normal life functions;
- a congenital anomaly/birth defect;
- a medical or surgical intervention to prevent death, a life-threatening event, hospitalization, disability, or congenital anomaly.

If a serious and unexpected adverse event occurs and appears to be associated with the use of sotrovimab, the prescribing healthcare provider and/or the provider's designee should complete and submit a MedWatch form to FDA using one of the following methods:

- Complete and submit the report online at [www.fda.gov/medwatch/report.htm](http://www.fda.gov/medwatch/report.htm), or

- Complete and submit a postage-paid FDA Form 3500 (<https://www.fda.gov/media/76299/download>) and return by:
  - Mail to MedWatch, 5600 Fishers Lane, Rockville, MD 20852-9787, or
  - Fax (1-800-FDA-0178), or
- Call 1-800-FDA-1088 to request a reporting form.

**IMPORTANT: When reporting adverse events or medication errors to MedWatch, please complete the entire form with detailed information. It is important that the information reported to FDA be as detailed and complete as possible. Information should include:**

- Patient demographics (e.g., patient initials, date of birth),
- Pertinent medical history,
- Pertinent details regarding admission and course of illness,
- Concomitant medications,
- Timing of adverse event(s) in relationship to administration of sotrovimab,
- Pertinent laboratory and virology information,
- Outcome of the event and any additional follow-up information if it is available at the time of the MedWatch report. Subsequent reporting of follow-up information should be completed if additional details become available.

The following steps are highlighted to provide the necessary information for safety tracking:

1. In Section A, Box 1, provide the patient’s initials in the Patient Identifier.
2. In Section A, Box 2, provide the patient’s date of birth.
3. In Section B, Box 5, description of the event:
  - a. Write “Sotrovimab use for COVID-19 under Emergency Use Authorization (EUA)” as the first line.
  - b. Provide a detailed report of medication error and/or adverse event. It is important to provide detailed information regarding the patient and adverse event/medication error for ongoing safety evaluation of this unapproved drug. Please see information to include listed above.
4. In Section G, Box 1, name and address:
  - a. Provide the name and contact information of the prescribing healthcare provider or institutional designee who is responsible for the report.
  - b. Provide the address of the treating institution (NOT the healthcare provider’s office address).

## 9 OTHER REPORTING REQUIREMENTS

- In addition, please provide a copy of all FDA MedWatch forms to:

GlaxoSmithKline, Global Safety

Fax: 919-287-2902

Email: [WW.GSKAEReportingUS@gsk.com](mailto:WW.GSKAEReportingUS@gsk.com)

Or call the GSK COVID Contact Center at 1-866-GSK-COVID (866-475-2684) to report adverse events.

## 10 DRUG INTERACTIONS

Clinical drug-drug interaction studies have not been performed with sotrovimab. Sotrovimab is not renally excreted or metabolized by cytochrome P450 (CYP) enzymes; therefore, interactions with concomitant medications that are renally excreted or that are substrates, inducers, or inhibitors of CYP enzymes are unlikely.

## 11 USE IN SPECIFIC POPULATIONS

### 11.1 Pregnancy

#### Risk Summary

There are insufficient data to evaluate a drug-associated risk of major birth defects, miscarriage, or adverse maternal or fetal outcome. Sotrovimab should be used during pregnancy only if the potential benefit justifies the potential risk for the mother and the fetus.

Nonclinical reproductive toxicity studies have not been conducted with sotrovimab. In a cross-reactive binding assay using a protein array enriched for human embryofetal proteins, no off-target binding was detected for sotrovimab. Since sotrovimab is an Fc-enhanced human immunoglobulin G (IgG), it has the potential for placental transfer from the mother to the developing fetus. The potential treatment benefit or risk of placental transfer of sotrovimab to the developing fetus is not known.

The estimated background risk of major birth defects and miscarriage for the indicated population is unknown. All pregnancies have a background risk of birth defect, loss, or other adverse outcomes. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2% to 4% and 15% to 20%, respectively.

### 11.2 Lactation

#### Risk Summary

There are no available data on the presence of sotrovimab in human or animal milk, the effects on the breastfed infant, or the effects on milk production. The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for sotrovimab and

any potential adverse effects on the breastfed infant from sotrovimab or from the underlying maternal condition. Individuals with COVID-19 who are breastfeeding should follow practices according to clinical guidelines to avoid exposing the infant to COVID-19.

### **11.3 Pediatric Use**

Sotrovimab is not authorized for use in pediatric patients under 12 years of age or weighing less than 40 kg. The safety and effectiveness of sotrovimab have not been assessed in pediatric patients. The recommended dosing regimen in patients 12 years to less than 18 years of age, weighing at least 40 kg, is expected to result in comparable serum exposures of sotrovimab as those observed in adults based on an allometric scaling approach (which accounted for effect of body weight changes associated with age on clearance and volume of distribution).

### **11.4 Geriatric Use**

Of the 430 patients receiving sotrovimab in COMET-ICE, 20% were 65 years of age and older and 10% were over 70 years of age. The difference in pharmacokinetics (PK) of sotrovimab in geriatric patients compared to younger patients has not been quantified.

### **11.5 Renal Impairment**

No clinical trials have been conducted to evaluate the effects of renal impairment on the PK of sotrovimab. Sotrovimab is not eliminated intact in the urine, thus renal impairment is not expected to affect the exposure of sotrovimab.

### **11.6 Hepatic Impairment**

No clinical trials have been conducted to evaluate the effects of hepatic impairment on the PK of sotrovimab. The impact of hepatic impairment on the PK of sotrovimab is unknown.

## **12 OVERDOSAGE**

There is no human experience of acute overdosage with sotrovimab.

There is no specific treatment for an overdose with sotrovimab. If overdose occurs, the patient should be treated supportively with appropriate monitoring as necessary.

## **13 PRODUCT DESCRIPTION**

Sotrovimab is a human immunoglobulin G-1 (IgG1-kappa) monoclonal antibody consisting of 2 identical light chain (LC) polypeptides composed of 214 amino acids each and 2 identical heavy chain (HC) polypeptides, each composed of 457 amino acids. Sotrovimab is produced by a Chinese Hamster Ovary cell line and has a molecular weight of approximately 149 kDa.

Sotrovimab injection is a sterile, preservative-free, clear, colorless or yellow to brown solution supplied in a single-dose vial for intravenous infusion after dilution.

Each mL contains sotrovimab (62.5 mg), L-histidine (1.51 mg), L-histidine monohydrochloride (2.15 mg), L-methionine (0.75 mg), polysorbate 80 (0.4 mg), and sucrose (70 mg). The solution

of sotrovimab has a pH of 6.0.

## 14 CLINICAL PHARMACOLOGY

### 14.1 Mechanism of Action

Sotrovimab is a recombinant human IgG1-kappa mAb that binds to a conserved epitope on the spike protein receptor binding domain of SARS-CoV-2 with a dissociation constant ( $K_D = 0.21$  nM) but does not compete with human ACE2 receptor binding ( $IC_{50}$  value  $>33.6$  nM [ $5$   $\mu\text{g/mL}$ ]). Sotrovimab inhibits an undefined step that occurs after virus attachment and prior to fusion of the viral and cell membranes. The Fc domain of sotrovimab includes M428L and N434S amino acid substitutions (LS modification) that extend antibody half-life, but do not impact wild-type Fc-mediated effector functions in cell culture.

### 14.2 Pharmacokinetics

It is expected that the half-life of sotrovimab is longer than Fc-unmodified IgG due to the LS modification, but data are not available. Based on noncompartmental analysis, the mean (geomean)  $C_{\text{max}}$  following a 1 hour IV infusion was  $137$   $\mu\text{g/mL}$  ( $N = 129$ ,  $CV\% 40$ ), and the mean (geomean) Day 29 concentration was  $34$   $\mu\text{g/mL}$  ( $N = 78$ ,  $CV\% 23$ ) from all subjects with an available Day 29 sample.

#### Specific Populations

The effect of different covariates (e.g., age, sex, race, body weight, disease severity, hepatic impairment) on the PK of sotrovimab is unknown. Renal impairment is not expected to impact the PK of sotrovimab since mAbs with molecular weight  $>69$  kDa do not undergo renal elimination. Similarly, dialysis is not expected to impact the PK of sotrovimab.

## 15 MICROBIOLOGY/RESISTANCE INFORMATION

#### Antiviral Activity

The neutralization activity of sotrovimab against SARS-CoV-2 (isolate USA WA1/2020) was measured in a concentration response model using cultured Vero E6 cells. Sotrovimab neutralized SARS-CoV-2 with an average  $EC_{50}$  value of  $0.67$  nM ( $100.1$  ng/mL) and an average  $EC_{90}$  value of  $1.2$  nM ( $186.3$  ng/mL).

Sotrovimab demonstrated cell culture Fc $\gamma$ R activation using Jurkat reporter cells expressing Fc $\gamma$ RIIa (low-affinity R131 and high affinity H131 alleles), Fc $\gamma$ RIIIa (low-affinity F158 and high-affinity V158 alleles) and Fc $\gamma$ RIIb. Sotrovimab exhibited antibody-dependent cell-mediated cytotoxicity (ADCC) in cell culture using isolated human natural killer (NK) cells following engagement with target cells expressing spike protein. Sotrovimab also elicited antibody-dependent cellular phagocytosis (ADCP) in cell-based assays using CD14<sup>+</sup> monocytes targeting cells expressing spike protein.

### Antibody Dependent Enhancement (ADE) of Infection

The risk that sotrovimab could mediate viral uptake and replication by immune cells was studied in U937 cells, primary human monocytic dendritic cells, and peripheral blood mononuclear cells. This experiment did not demonstrate productive viral infection in immune cells exposed to SARS CoV-2 in the presence of concentrations of sotrovimab from 1-fold down to 1000-fold below the EC<sub>50</sub> value.

The potential for ADE was also evaluated in a hamster model of SARS-CoV-2 using sotrovimab. Intraperitoneal administration prior to inoculation resulted in a dose-dependent improvement in all measured outcomes (body weight, lung weight, total viral RNA in the lungs, or infectious virus levels based on TCID<sub>50</sub> measurements). No evidence of enhancement of disease was observed at any dose evaluated, including sub-neutralizing doses down to 0.05 mg/kg.

### Antiviral Resistance

There is a potential risk of treatment failure due to the development of viral variants that are resistant to sotrovimab. Prescribing healthcare providers should consider the prevalence of SARS-CoV-2 variants in their area, where data are available, when considering treatment options.

An E340A amino acid substitution in the spike protein emerged in cell culture selection of resistant virus and had a >100-fold reduction in activity in a pseudotyped virus-like particle (VLP) assay. This substitution is in the conserved epitope of sotrovimab, which is comprised of 23 amino acids. A pseudotyped VLP assessment in cell culture showed that epitope amino acid sequence polymorphisms P337H/L/R/T and E340A/K/G conferred reduced susceptibility to sotrovimab based on observed fold-increase in EC<sub>50</sub> value shown in parentheses: E340K (>297), P337R (>276), P337L (180), E340A (>100), E340G (27), P337H (7.5), and P337T (5.4). The presence of the highly prevalent D614G variant, either alone or in combination, did not alter neutralization of sotrovimab. Pseudotyped VLP assessments indicate that sotrovimab retains activity against the UK (2.3-fold change in EC<sub>50</sub> value; B.1.1.7: H69-, V70-, Y144-, N501Y, A570D, D614G, P681H, T716I, S982A, D1118H), South Africa (0.6-fold change in EC<sub>50</sub> value; B.1.351: L18F, D80A, D215G, R246I, K417N, E484K, N501Y, D614G, A701V), Brazil (0.35-fold change in EC<sub>50</sub> value; P.1: L18F, T20N, P26S, D138Y, R190S, K417T, E484K, N501Y, D614G, H655Y, T1027I, V1176F), California (0.7-fold change in EC<sub>50</sub> value; CAL.20C: S13I, W152C, L452R, D614G), New York (0.6-fold change in EC<sub>50</sub> value; B.1.526: L5F, T95I, D253G, E484K, D614G, A701V), and India (0.7-fold change in EC<sub>50</sub> value; B.1.617; T95I, G142D, E154K, L452R, E484Q, D614G, P681R, and Q1071H) variant spike proteins (Table 1). Microneutralization data using authentic SARS-CoV-2 variant virus indicate that sotrovimab retains activity against the UK (3-fold change in EC<sub>50</sub> value), South Africa (1.2-fold change in EC<sub>50</sub> value) and Brazil (1.6-fold change in EC<sub>50</sub> value) variants (Table 1).

**Table 1: Authentic SARS-CoV-2 and Pseudotyped Virus-Like Particle Neutralization Data for SARS-CoV-2 Variant Substitutions with Sotrovimab**

<b>Lineage with Spike Protein Substitution</b>	<b>Key Substitutions Tested<sup>a</sup></b>	<b>Fold Reduction in Susceptibility (Pseudotyped VLP)</b>	<b>Fold Reduction in Susceptibility (Authentic Virus)</b>
B.1.1.7 (UK origin)	N501Y	No change <sup>b</sup>	No change <sup>b</sup>
B.1.351 (South Africa origin)	K417N + E484K + N501Y	No change <sup>b</sup>	No change <sup>b</sup>
P.1 (Brazil origin)	K417T + E484K + N501Y	No change <sup>b</sup>	No change <sup>b</sup>
B.1.427/B.1.429 (California origin)	L452R	No change <sup>b</sup>	nd <sup>d</sup>
B.1.526 (New York origin) <sup>c</sup>	E484K	No change <sup>b</sup>	nd <sup>d</sup>
B.1.617 (India origin)	L452R + E484Q	No change <sup>b</sup>	nd <sup>d</sup>

<sup>a</sup> For variants with more than one substitution of concern, only the one(s) with the greatest impact on activity is (are) listed.

<sup>b</sup> No change: <5-fold reduction in susceptibility

<sup>c</sup> Not all isolates of the New York lineage harbor the E484K substitution (as of February 2021).

<sup>d</sup> Not determined.

Limited nucleotide sequencing data from a total of 218 participants, at the time of authorization, indicated that 9 participants (5 placebo and 4 treated with sotrovimab) enrolled in COMET-ICE were infected with the CAL.20C variant (S13I, W152C, L452R), and one subject treated with sotrovimab progressed to require hospitalization. Two additional participants in the placebo group carried the L452R variant only. None of the participants were infected with SARS-CoV-2 that contained the full complement of spike substitutions characteristic of the UK (B.1.1.7), South African (B.1.351), or Brazilian (P.1) variants. One participant in the placebo group carried the N501Y variant at baseline.

In COMET-ICE, post-baseline epitope variants were detected in eight participants in the cohort receiving sotrovimab (spike protein substitutions E340K [4 subjects: ≥99.7% allele frequency]; A344V [6.2%]; K356R [7.5%]; S359G [2 subjects: 12.2% and 8.3%]). Of the variants detected at baseline and post-baseline, L335F, G339C, E340A, E340K, R346I, K356N, K356R, R357I, I358V and S359G substitutions have been assessed phenotypically using a pseudotyped VLP system. E340A and E340K substitutions confer reduced susceptibility to sotrovimab (>100-fold and >297-fold changes in EC<sub>50</sub> value, respectively). Sotrovimab retains susceptibility against L335F (0.8-fold change in EC<sub>50</sub> value), G339C (1.2-fold change in EC<sub>50</sub> value), R346I (1.7-fold

change in EC<sub>50</sub> value), K356N (1.1-fold change in EC<sub>50</sub> value), K356R (0.8-fold change in EC<sub>50</sub> value), R357I (1-fold change in EC<sub>50</sub> value), I358V (0.7-fold change in EC<sub>50</sub> value), and S359G (0.8-fold change in EC<sub>50</sub> value) substitutions. The clinical impact of these variants is not yet known. Data collection and analysis is still ongoing.

### Immune Response Attenuation

There is a theoretical risk that antibody administration may attenuate the endogenous immune response to SARS-CoV-2 and make patients more susceptible to re-infection.

## **16 NONCLINICAL TOXICOLOGY**

Carcinogenesis, mutagenesis, and reproductive toxicology studies with sotrovimab have not been conducted.

In a toxicology study in monkeys, sotrovimab had no adverse effects when administered intravenously.

In tissue cross reactivity studies using human and monkey adult tissues, no binding of clinical concern was detected for sotrovimab.

In a cross-reactive binding assay using a protein array enriched for human embryofetal proteins, no off-target binding was detected for sotrovimab.

## **17 ANIMAL PHARMACOLOGIC AND EFFICACY DATA**

In a Syrian Golden hamster model of SARS-CoV-2 infection, antiviral activity was demonstrated using a single dose of sotrovimab which was administered intraperitoneally at 24- or 48-hours prior to infection. Animals receiving 5 mg/kg or more of the antibody showed a significant improvement in body weight loss and significantly decreased total lung SARS-CoV-2 viral RNA compared to vehicle only and control antibody-treated animals. Levels of virus in the lung (as measured by TCID<sub>50</sub>) were significantly decreased versus controls in hamsters receiving 0.5 mg/kg or more of the antibody.

## **18 CLINICAL TRIAL RESULTS AND SUPPORTING DATA FOR EUA**

Clinical data supporting this EUA are based on an interim analysis from the Phase 1/2/3 COMET-ICE trial (NCT #04545060) that occurred after 583 randomized subjects had the opportunity to complete at least Day 29 of the trial. COMET-ICE is an ongoing, randomized, double-blind, placebo-controlled trial studying sotrovimab for the treatment of subjects with mild-to-moderate COVID-19 (subjects with COVID-19 symptoms who are not hospitalized). Eligible subjects were 18 years of age and older with at least one of the following comorbidities: diabetes, obesity (BMI >30), chronic kidney disease, congestive heart failure, chronic obstructive pulmonary disease, or moderate to severe asthma, or were 55 years of age and older regardless of comorbidities. The study included symptomatic patients with SARS-CoV-2 infection as confirmed by local laboratory tests and/or point of care tests and symptom onset within 5 days of

enrollment. Subjects with severe COVID-19 requiring supplemental oxygen or hospitalization and severely immunocompromised patients were excluded from the trial. Subjects were treated with a single 500-mg infusion of sotrovimab (n = 291) or placebo (n = 292) over 1 hour (Intent to Treat [ITT] population at interim analysis 1).

At baseline, the median age was 53 years (range:18 to 96); 22% of subjects were 65 years of age or older and 11% were over 70 years of age; 46% of subjects were male; 87% were White, 7% Black or African American, 6% Asian, 63% Hispanic or Latino. Fifty-eight percent of subjects received sotrovimab or placebo within 3 days of COVID-19 symptom onset and 42% within 4 to 5 days. The three most common pre-defined risk factors or comorbidities were obesity (63%), 55 years of age or older (47%), and diabetes requiring medication (23%). Overall, baseline demographic and disease characteristics were well balanced between the treatment arms.

The primary endpoint, progression of COVID-19 at Day 29, was reduced by 85% (adjusted relative risk reduction) in recipients of sotrovimab versus placebo (p = 0.002). Table 2 provides the results of the primary endpoint and a key secondary endpoint of COMET-ICE.

**Table 2. Interim Efficacy Results in Adults with Mild-to-Moderate COVID-19**

	<b>Sotrovimab n = 291</b>	<b>Placebo n = 292</b>
<b>Progression of COVID-19 (defined as hospitalization for &gt;24 hours for acute management of any illness or death from any cause) (Day 29)</b>		
Proportion (n, %)	3 (1%)	21 (7%)
Adjusted Relative Risk Reduction (97.24% CI)	85% (44%, 96%)	
p-value	0.002	
<b>All-cause mortality (up to Day 29)</b>		
Proportion (n, %)	0	1 (<1%)

Analysis of change from baseline in viral load in COMET-ICE is not yet possible because data are not available in the majority of trial participants.

## **19 HOW SUPPLIED/STORAGE AND HANDLING**

### How Supplied

Sotrovimab injection 500 mg (62.5 mg/mL) is a sterile, preservative-free, clear, colorless or yellow to brown solution supplied in a carton containing one single-dose glass vial with a rubber vial stopper (not made with natural rubber latex) and a flip-off cap (NDC 0173-0901-86).

### Storage and Handling

Sotrovimab is preservative-free. Discard unused portion.

Store unopened vials refrigerated at 2°C to 8°C (36°F to 46°F) in original carton. Do not freeze

or shake. Protect from light.

The solution of sotrovimab in the vial is preservative-free and requires dilution prior to administration. The diluted infusion solution of sotrovimab should be administered immediately. If immediate administration is not possible, store the diluted infusion solution for up to 24 hours at refrigerated temperature (2°C to 8°C [36°F to 46°F]) or up to 4 hours at room temperature (20°C to 25°C [68°F to 77°F]) including transportation and infusion time. If refrigerated, allow the infusion solution to equilibrate to room temperature for approximately 15 minutes prior to administration.

## **20 PATIENT COUNSELING INFORMATION**

Patients treated with sotrovimab should continue to self-isolate and use infection control measures (e.g., wear mask, isolate, social distance, avoid sharing personal items, clean and disinfect “high touch” surfaces, and frequent handwashing) according to CDC guidelines. Also, see “Fact Sheet for Patients, Parents, and Caregivers”.

## **21 CONTACT INFORMATION**

For additional information visit [www.sotrovimabinfo.com](http://www.sotrovimabinfo.com)

If you have questions, please call the GSK COVID Contact Center at 1-866-GSK-COVID (866-475-2684).



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Research Triangle Park, NC 27709

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Revised: Month 2021