Food and Drug Administration
Center for Drug Evaluation and Research

Final Summary Minutes of the Oncologic Drugs Advisory Committee Meeting
October 5, 2023

Location: All meeting participants were heard, viewed, captioned, and recorded for this advisory committee meeting via an online teleconferencing and/or video conferencing platform.

Topic: The Committee discussed supplemental new drug application (sNDA) 214665/S-005, for LUMAKRAS (sotorasib) tablets, submitted by Amgen Inc., for the proposed treatment of adult patients with KRAS G12C mutated locally advanced or metastatic non-small cell lung cancer (NSCLC), as determined by an FDA approved test, who have received at least one prior systemic therapy. This supplement proposes to convert the NDA to full approval based on the confirmatory study, CodeBreaK 200. The Committee considered the results of the CodeBreaK 200 study and discussed the benefit-risk profile of LUMAKRAS.

These summary minutes for the October 5, 2023 meeting of the Oncologic Drugs Advisory Committee of the Food and Drug Administration were approved on December 1, 2023.

I certify that I attended the October 5,2023 meeting of the Oncologic Drugs Advisory Committee of the Food and Drug Administration and that these minutes accurately reflect what transpired.

/s/	**/s/**
Joyce Frimpong, PharmD	Ravi A. Madan, MD
Acting Designated Federal Officer, ODAC	Chairperson, ODAC

Final Summary Minutes of the Oncologic Drugs Advisory Committee Meeting
October 5, 2023

The Oncologic Drugs Advisory Committee (ODAC) of the Food and Drug Administration, Center for Drug Evaluation and Research met on October 5, 2023. The meeting presentations were heard, viewed, captioned, and recorded through an online video conferencing platform. Prior to the meeting, the members and temporary voting members were provided the briefing materials from the FDA and Amgen Inc. The meeting was called to order by Ravi Madan, MD (Chairperson). The conflict of interest statement was read into the record by Joyce Frimpong, PharmD (Acting Designated Federal Officer). There were approximately 1400 people in attendance. There were 6 Open Public Hearing (OPH) speaker presentations.

A verbatim transcript will be available, in most instances, at approximately ten to twelve weeks following the meeting date.

Agenda: The Committee discussed supplemental new drug application (sNDA) 214665/S-005, for LUMAKRAS (sotorasib) tablets, submitted by Amgen Inc., for the proposed treatment of adult patients with KRAS G12C mutated locally advanced or metastatic non-small cell lung cancer (NSCLC), as determined by an FDA approved test, who have received at least one prior systemic therapy. This supplement proposes to convert the NDA to full approval based on the confirmatory study, CodeBreaK 200. The Committee considered the results of the CodeBreaK 200 study and discussed the benefit-risk profile of LUMAKRAS.

Attendance:
Oncologic Drugs Advisory Committee Members Present (Voting): Mark R. Conaway, PhD; William J. Gradishar, MD; Ravi A. Madan, MD (*Chairperson*); David E. Mitchell (*Consumer Representative*); Jorge J. Nieva, MD; Ashley Rosko, MD; Daniel Spratt, MD; Neil Vasan, MD, PhD

Oncologic Drugs Advisory Committee Members Not Present (Voting): Ranjana H. Advani, MD; Toni K. Choueiri, MD; Pamela L. Kunz, MD; Christopher H. Lieu, MD; Alberto S. Pappo, MD

Oncologic Drugs Advisory Committee Member Not Present (Non-Voting): Johnathan D. Cheng, MD (*Industry Representative*)

Acting Industry Representative to the Committee (Non-Voting): Albert L. Kraus, PhD

Temporary Members (Voting): James L. Gulley, MD, PhD, FACP; Philip C. Hoffman, MD; James Pantelas (*Patient Representative*); Pamela Shaw, PhD, MS

FDA Participants (Non-Voting): Richard Pazdur, MD; Harpreet Singh, MD; Paz Vellanki, MD, PhD; Jeevan Puthiamadathil, MD; Pallavi Mishra-Kalyani, PhD; Anup Amatya, PhD; Chi (Chuck) Song, PhD

Acting Designated Federal Officer (Non-Voting): Joyce Frimpong, PharmD

Open Public Hearing Speakers: Howard Mosby (Heal Collective); Terri Conneran (KRAS Kickers); Dusty Joy Donaldson (Dusty Joy Foundation (LiveLung)); Debbie Weir (Cancer Support Community); Jim Baranski (Lung Cancer Foundation of America); Sherri Eccleston

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The agenda was as follows:

Call to Order	**Ravi A. Madan, MD** Chairperson, ODAC
Introduction of Committee/ Conflict of Interest Statement	**Joyce Frimpong, PharmD** Acting Designated Federal Officer, ODAC
FDA Opening Remarks	**Harpreet Singh, MD** Director Division of Oncology 2 (DO2) OOD, OND, CDER, FDA
APPLICANT PRESENTATIONS	**Amgen Inc.**
Introduction	**Jackie Kline, PhD** Vice President, Global Regulatory Affairs Amgen Inc.
Efficacy	**Bhakti Mehta, MD, MPH** Executive Medical Director Global Clinical Development Amgen Inc.
Safety	**Osa Eisele, MD, MPH** Executive Medical Director Global Patient Safety Amgen Inc.
Reliability of CodeBreak 200 Results	**Gregory Friberg, MD** Vice President, Medical Affairs Amgen Inc.
Clinical Perspective	**Melissa Johnson, MD** Director of Lung Cancer Research Sarah Cannon Research Institute
FDA PRESENTATIONS	
Sotorasib for KRAS G12C Mutated Locally Advanced or Metastatic Nonsquamous Non-Small Cell Lung Cancer	**Jeevan Puthiamadathil, MD** Clinical Reviewer DO2, OOD, OND, CDER, FDA

Chi (Chuck) Song, PhD
Statistical Reviewer
Division of Biometrics V (DBV)
Office of Biostatistics (OB)
Office of Translation Sciences (OTS)
CDER, FDA

Paz Vellanki, MD, PhD
Cross Disciplinary Team Lead
DO2, OOD, OND, CDER, FDA

Clarifying Questions

LUNCH

OPEN PUBLIC HEARING

Questions to the Committee/Committee Discussion

ADJOURNMENT

Questions to the Committee:

1. **VOTE:** Can the primary endpoint, progression-free survival (PFS) per blinded independent central review (BICR), be reliably interpreted in CodeBreak200?

   Vote Result: Yes: 2 No: 10 Abstain: 0

   Committee Discussion: *A majority of the committee agreed that the primary endpoint, PFS per BICR cannot be reliably interpreted in CodeBreak200. Those who voted, "No", questioned whether the study results could be reliably interpreted due to asymmetric early dropout with more patients on the control arm compared to the experimental arm who never received study therapy, imaging assessments favoring the experimental arm, and early crossover of patients on the control arm prior to confirmation of disease progression by BICR. Those who voted, "No" also questioned if there were study conduct issues related to the BICR-assessment of PFS, and in general the study's integrity. Many committee members also noted that the PFS results did not translate to an overall survival benefit. Those who voted, "Yes", stated that from their interpretation of the question, the study had met the primary endpoint based on its intent to treat analysis. Please see the transcript for details of the Committee's discussion.*

The meeting was adjourned at approximately 3:00 p.m.