clinical trial updates

Long-Term Outcomes and Molecular Correlates of Sotorasib Efficacy in Patients With Pretreated *KRAS* G12C-Mutated Non–Small-Cell Lung Cancer: 2-Year Analysis of CodeBreaK 100

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abstract

Clinical trials frequently include multiple end points that mature at different times. The initial report, typically based on the primary end point, may be published when key planned co-primary or secondary analyses are not yet available. Clinical Trial Updates provide an opportunity to disseminate additional results from studies, published in JCO or elsewhere, for which the primary end point has already been reported.

In the longest follow-up, to our knowledge, for a $KRAS^{G12C}$ inhibitor, we assessed the long-term efficacy, safety, and biomarkers of sotorasib in patients with *KRAS* G12C-mutated advanced non–small-cell lung cancer (NSCLC) from the CodeBreaK 100 clinical trial (ClinicalTrials.gov identifier: NCT03600883). This multicenter, single-group, open-label phase I/phase II trial enrolled 174 patients with *KRAS* G12C-mutated, locally advanced or metastatic NSCLC after progression on prior therapies. Patients (N = 174) received sotorasib 960 mg once daily with the primary end points for phase I of safety and tolerability and for phase II of objective response rate (ORR). Sotorasib produced an ORR of 41%, median duration of response of 12.3 months, progression-free survival (PFS) of 6.3 months, overall survival (OS) of 12.5 months, and 2-year OS rate of 33%. Long-term clinical benefit (PFS ≥ 12 months) was observed in 40 (23%) patients across PD-L1 expression levels, in a proportion of patients with somatic *STK11* and/or *KEAP1* alterations, and was associated with lower baseline circulating tumor DNA levels. Sotorasib was well tolerated, with few late-onset treatment-related toxicities, none of which led to treatment discontinuation. These results demonstrate the long-term benefit of sotorasib, including in subgroups with poor prognosis.

J Clin Oncol 41:3311-3317. © 2023 by American Society of Clinical Oncology

INTRODUCTION

Overall survival (OS) remains poor for molecularly unselected, advanced non–small-cell lung cancer (NSCLC),[1,2] with 2-5 months of median progression-free survival (PFS) on second-line plus chemotherapy or immunotherapy.[3-6]

Sotorasib specifically and irreversibly inhibits $KRAS^{G12C}$,[7-10] with approval in over 40 countries[11-13] for adults with *KRAS* G12C-mutated advanced NSCLC after prior systemic therapy.[14,15] In CodeBreaK 100 phase II, sotorasib demonstrated an objective response rate (ORR) of 37%, a median duration of response (DOR) of 11.1 months, a median PFS of 6.8 months, a median OS of 12.5 months, and a manageable safety profile in *KRAS* G12C-mutated advanced NSCLC.[16]

We report CodeBreaK 100 phase I/II 2-year pooled analyses representing, to our knowledge, the longest $KRAS^{G12C}$ inhibitor treatment follow-up to date.

METHODS

Patients

The multicenter, single-group, open-label phase I/II CodeBreaK 100 trial (ClinicalTrials.gov identifier: NCT03600883) enrolled patients age 18 years and older with *KRAS* G12C-mutated locally advanced or metastatic NSCLC after progression on prior therapies (Data Supplement, online only).[16] Institutional review board approval before study initiation and participating country regulatory authority approval were received; all patients provided written informed consent.

Study Design

Phase I primary end point was safety and tolerability (key secondary: DOR and PFS). Phase II primary end point was ORR (blinded independent central review; key secondary: DOR, PFS, OS, and safety). Late-onset toxicities were assessed (treatment-related adverse events [TRAEs] occurring after 1 year on treatment).

ASSOCIATED CONTENT

Data Supplement

Protocol

Author affiliations and support information (if applicable) appear at the end of this article.

Accepted on March 3, 2023 and published at ascopubs.org/journal/jco on April 25, 2023: DOI https://doi.org/10.1200/JCO.22.02524

CONTEXT

Key Objective

To determine the long-term safety, tolerability, and efficacy of sotorasib 960 mg once daily in patients with *KRAS* G12C-mutated, locally advanced or metastatic non–small-cell lung cancer from the CodeBreaK 100 clinical trial (ClinicalTrials.gov identifier: NCT03600883). Exploratory analyses assessed the relationship of various biomarkers, such as PD-L1 expression level and genomic alterations, with efficacy.

Knowledge Generated

This 2-year pooled analysis of CodeBreaK 100, which is, to our knowledge, the largest clinical data set with the longest follow-up reported for patients treated with any $KRAS^{G12C}$ inhibitor to date, showed that sotorasib treatment provided long-term efficacy and was well tolerated, with no new safety signals detected. Long-term benefit with sotorasib (defined as progression-free survival of at least 12 months) was associated with lower baseline circulating tumor DNA levels and was observed across *KRAS* G12C variant allele frequency levels, PD-L1 expression levels, and in a proportion of patients with *STK11* and/or *KEAP1* comutations.

Relevance

The findings from this analysis with over 2-year follow-up data demonstrate that nearly a quarter of previously treated advanced stage *KRAS* G12C-mutated NSCLC patients treated with sotorasib derived long-term benefit, with few late-onset treatment-related toxicities, supporting not only its use in this treatment setting but also additional studies investigating its therapeutic role in earlier lines of therapy.

Exploratory analyses evaluated molecular correlates with efficacy (Data Supplement).[16] PD-L1 and genomic alterations were correlated with long-term benefit (PFS ≥ 12 months) versus early progression (nonresponders with PFS ≤ 3 months).

RESULTS

Patients

As of February 22, 2022, 174 patients (phase I, N = 48; phase II, N = 126) received sotorasib 960 mg once daily (Table 1). Median treatment duration was 5.6 months (range, 0.2-35.9); 13 patients remained on treatment at cutoff. Median prior lines of therapy was 2.0 (range, 0 to 4+). Prior therapies included anti–PD-(L)1 (157 [90%]) and platinum-based chemotherapy plus anti–PD-(L)1 (144 [83%]).

Safety

Any-grade TRAEs were observed in 121 (70%) patients (Data Supplement), with grade 3 in 34 (20%), grade 4 in 2 (1%), and no fatal TRAEs; TRAEs led to treatment reduction or interruption in 39 (22%) and treatment discontinuation in 11 (6%). Most common TRAEs were diarrhea (53 [30%]), increased alanine aminotransferase level (31 [18%]), and increased aspartate aminotransferase level (31 [18%]). Median (range) time to grade ≥ 3 diarrhea and hepatotoxicity onset was 6.1 (1.7-11.1) and 9.1 (3.1-18.7) weeks. All grade ≥ 3 (median [range] duration, weeks) diarrhea resolved (2.9 [0.3-6.0]); grade ≥ 3 hepatotoxicity resolved in all but three of 19 (16%; 5.5 [0.4-39.1]). Trends toward increased hepatotoxicity in patients receiving checkpoint inhibitors ≤ versus >3 months before sotorasib initiation were observed (Data Supplement).

Of 45 patients who continued sotorasib beyond 1 year, 11 (24%) had any-grade TRAEs after 1 year on treatment (new-onset TRAEs), without trends in adverse event type. One grade 3 new-onset TRAE (2%; hemolytic anemia) resolved in 5 days (sotorasib discontinued after disease progression). No grade 4 or 5 new-onset TRAEs occurred. New-onset TRAEs led to dose reduction in one (2%) patient without treatment discontinuation.

Efficacy

ORR was 41% (95% CI, 33.3 to 48.4), and DCR was 84% (95% CI, 77.3 to 88.9; Data Supplement). Of patients with confirmed response, estimated 72.8% (95% CI, 60.0 to 82.2) and 50.6% (37.4 to 62.4) remained in response at 6 and 12 months, respectively. Median DOR was 12.3 months (95% CI, 7.1 to 15.0).

Median PFS was 6.3 months (95% CI, 5.3 to 8.2; Fig 1A); median OS was 12.5 months (10.0 to 17.8; Fig 1B). Kaplan-Meier OS estimate was 51% (95% CI, 42.8 to 58.2) and 33% (95% CI, 25.0 to 40.2) at 12 and 24 months, respectively. At data cutoff, nine of 70 (13%) patients with response remained on study without progression, including five receiving sotorasib for ≥2 years with continued response (Fig 1C).

Sixteen patients had evaluable brain metastases per central Response Assessment in exploratory Neuro-Oncology Brain Metastases review (Data Supplement); three (19%) had complete response and 11 (69%) had stable disease, with 14 (88%) having intracranial disease control overall (Data Supplement).

Across 172 efficacy-evaluable patients, 40 (23%) had long-term clinical benefit (PFS ≥ 12 months) and 62 (36%) had

TABLE 1. Patient Demographics and Baseline Characteristics

Characteristic	Phase I (N = 48)	Phase II (N = 126)	Total (N = 174)
Age, years, median (range)	68.5 (49-86)	63.5 (37-80)	65.0 (37-86)
Female, No. (%)	28 (58)	63 (50)	91 (52)
Race, No. (%)			
White	38 (79)	103 (82)	141 (81)
Asian	6 (13)	19 (15)	25 (14)
Black	2 (4)	2 (2)	4 (2)
Other	2 (4)	2 (2)	4 (2)
PD-L1 protein expression, No. (%)[a]			
<1%	13 (27)	33 (26)	46 (26)
≥1% to 49%	12 (25)	30 (24)	42 (24)
≥50%	9 (19)	35 (28)	44 (25)
Unknown	14 (29)	28 (22)	42 (24)
Disease stage at screening, No. (%)			
III	1 (2)	5 (4)	6 (3)
IV	47 (98)	121 (96)	168 (97)
Metastatic sites, No. (%)			
Bone	20 (42)	61 (48)	81 (47)
Brain	14 (29)	26 (21)	40 (23)
Liver	12 (25)	26 (21)	38 (22)
ECOG PS at baseline, No. (%)			
0	11 (23)	38 (30)	49 (28)
1	37 (77)	88 (70)	125 (72)
Prior lines of therapy, No. (%)			
0	2 (4)	0	2 (1)
1	17 (35)	54 (43)	71 (41)
2	14 (29)	44 (35)	58 (33)
≥ 3	15 (31)	28 (22)	43 (25)
Type of prior therapy, No. (%)[b]			
Platinum-based chemotherapy	48 (100)	113 (90)	161 (93)
Anti–PD-(L)1	41 (85)	116 (92)	157 (90)
Platinum-based chemotherapy and anti–PD-(L)1	41 (85)	103 (82)	144 (83)
Anti-VEGF biological therapy	10 (21)	26 (21)	36 (21)
Targeted small molecules	10 (21)	9 (7)	19 (11)
Best response to last prior line of therapy, No. (%)[c]			
Complete response	0	1 (1)	1 (1)
Partial response	2 (4)	12 (10)	14 (8)
Stable disease	11 (23)	33 (26)	44 (25)
Progressive disease	24 (50)	48 (38)	72 (41)
Unevaluable/unknown/missing	9 (19)	32 (25)	41 (24)
Duration of sotorasib treatment, months, median (range)	6.0 (0.2-35.9)	5.5 (0.2-26.9)	5.6 (0.2-35.9)

Abbreviations: ECOG PS, Eastern Cooperative Oncology Group performance status; VEGF, vascular endothelial growth factor.
[a]Determined locally.
[b]Each patient may have had more than one prior therapy.
[c]Two patients with no prior line of therapy in phase I were excluded.

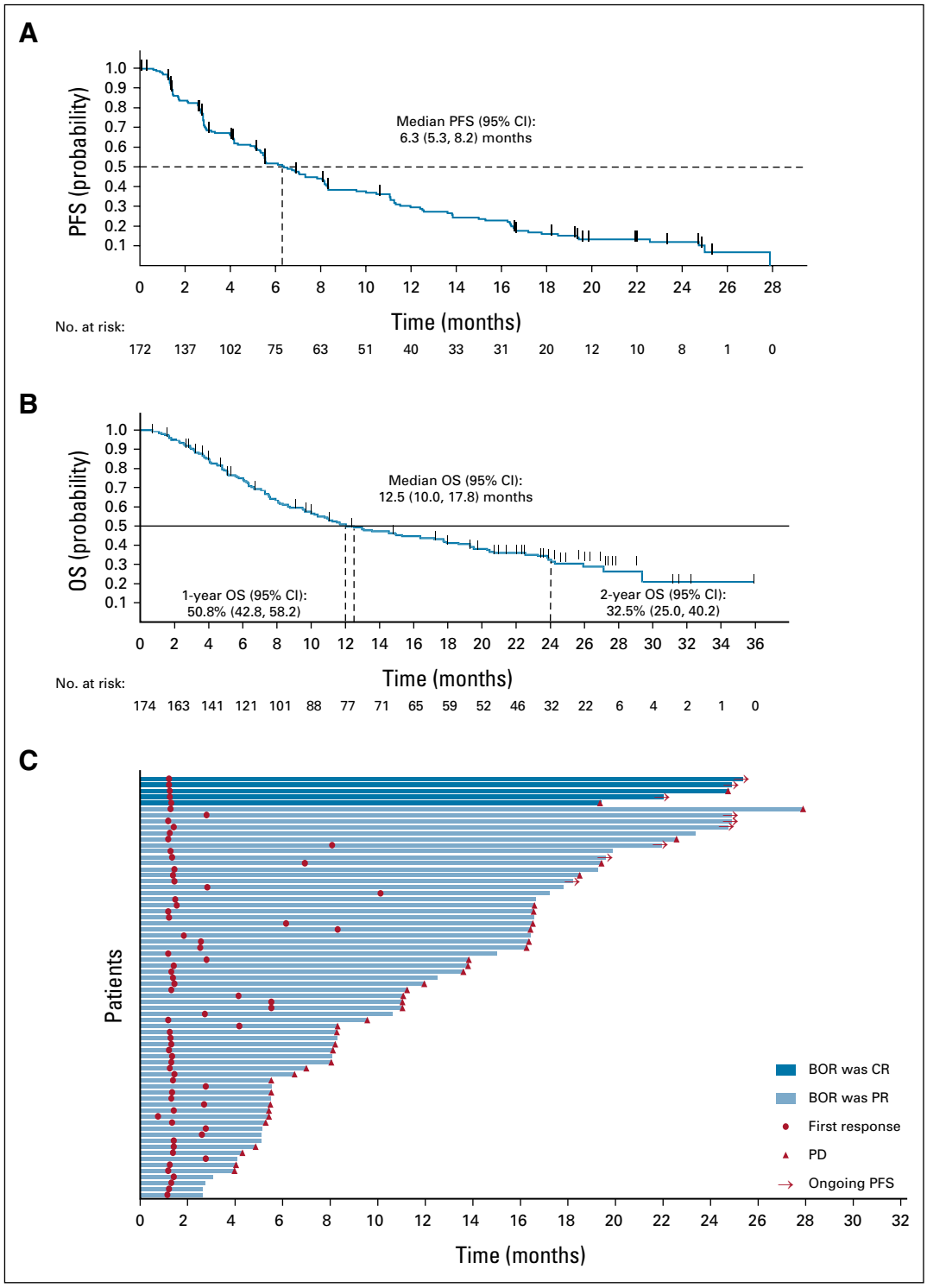

FIG 1. Long-term benefit and outcomes with sotorasib treatment. Kaplan-Meier plot of (A) PFS and (B) OS (median OS follow-up of 24.9 months [range, 0.7-35.9 months]) by central review, and (C) swimmer plot for phase I and phase II responders by central review (one patient with an ongoing response ended treatment because of patient request). BOR, best objective response; CR, complete response; OS, overall survival; PD, progressive disease; PFS, progression-free survival; PR, partial response.

early progression (PFS ≤ 3 months). Baseline characteristics were similar; the latter had slightly higher proportions of patients with visceral metastasis (liver/bone), progressive disease on prior therapy, and received prior platinum-based chemotherapy and immunotherapy.

Biomarker Analysis

Centrally measured PD-L1 and/or genomic data were available for 114 phase II patients (Data Supplement). Most prevalent alterations were *TP53* (46%), *LRP1B* (36%), *KDM6A* (32%), and *STK11* (32%).

Albeit limited in sample size, long-term clinical benefit with sotorasib was observed across PD-L1 expression levels (Fig 2A). There was a nonsignificant trend toward enrichment of longer benefit with PD-L1 tumor proportion score (TPS) <1% versus ≥1% (odds ratio [OR], 0.36 [0.12 to 1.12]), without significant differences between PD-L1 TPS 1%-49% and ≥50% (OR, 0.83 [0.07 to 9.69]). Most significant enrichment in patients with early progression was with mutant *KEAP1* (OR, 0.22 [0.06 to 0.87] long-term benefit *v* early progression); although not significant, these patients were more likely to have *ROS1* (single-nucleotide

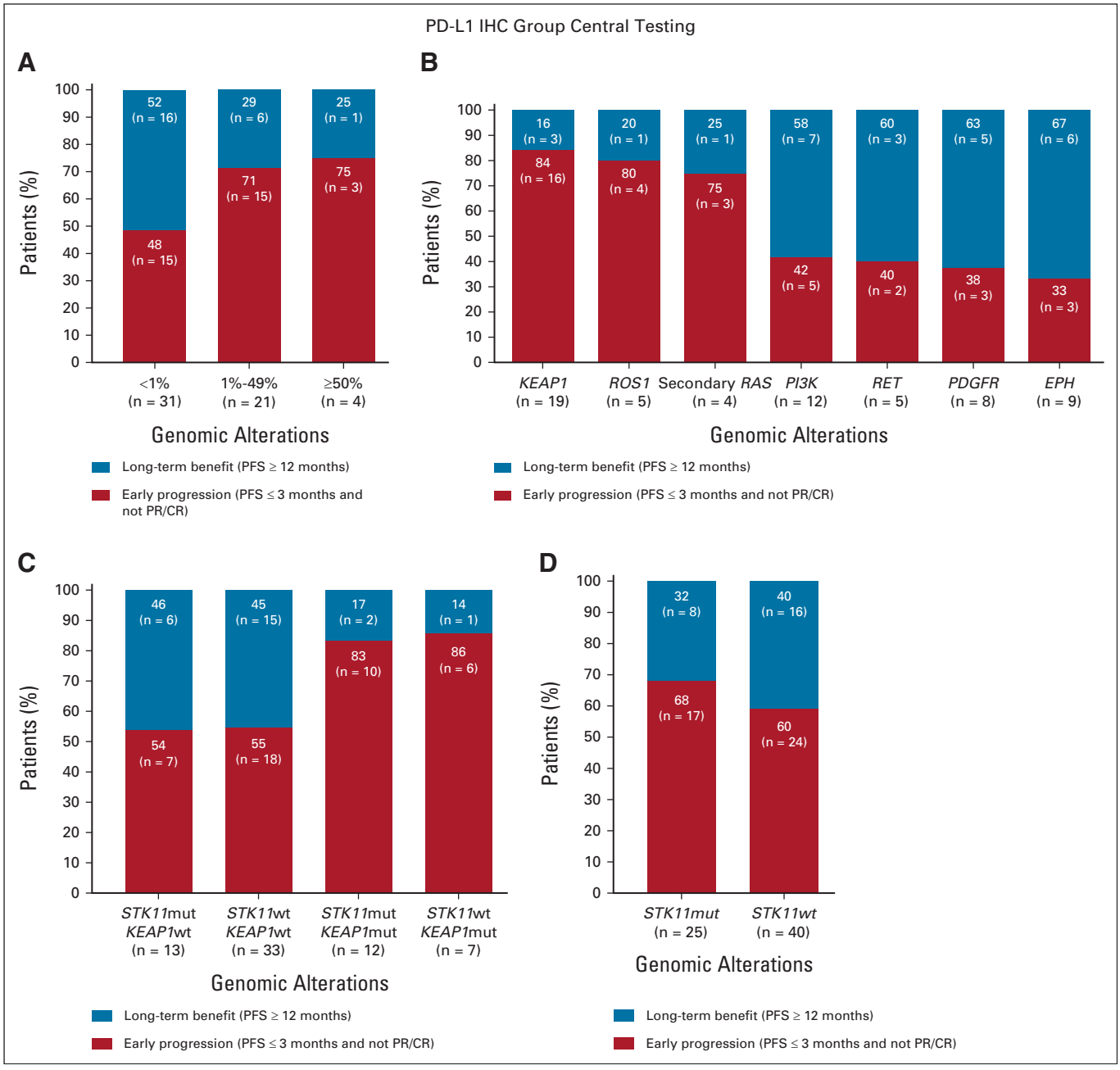

FIG 2. Association of long-term benefit and early progression with PD-L1 expression and genomic alterations: (A) PD-L1 tumor proportion score, (B) selected genomic alterations, (C) *STK11* and *KEAP1* mutations, and (D) Mutant versus wild-type *STK11*. CR, complete response; IHC, immunohistochemistry; PFS, progression-free survival; PR, partial response.

variant [SNV]) and secondary *RAS* mutations (Fig 2B; Data Supplement). Patients with long-term benefit were more likely to harbor mutations in *PI3K*, *PDGFR*, and *EPH* receptor gene family and *RET* SNVs. Association of *KEAP1* wild-type status with long-term benefit was independent of *STK11* mutation status (Fig 2C). Patients with *STK11* comutations were as likely to derive long-term benefit as patients with *STK11* wild-type (OR, 0.71 [0.25 to 2.02]; Fig 2D).

No difference in tumor tissue median *KRAS* G12C variant allele frequency (VAF) or tumor mutational burden was observed in long-term benefit or early progression groups (Data Supplement). Patients with long-term benefit tended to have lower baseline median plasma circulating tumor DNA (ctDNA; $P = .01$; Data Supplement).

DISCUSSION

In this analysis representing the most mature $KRAS^{G12C}$ inhibitor clinical data, sotorasib demonstrated long-term efficacy, without new safety signals.[16-18] A substantial proportion of patients derived long-term clinical benefit (1- and 2-year OS rates, 51% and 33%, respectively). Once-daily oral sotorasib 960 mg did not result in cumulative late-onset severe or chronic lower-grade toxicities.

Durable sotorasib benefit and safety profiles compare favorably with standard-of-care chemotherapy with docetaxel-based regimens, which historically yielded approximately 10%-23% response rates and a median PFS < 4.5 months.[19-24] Two-year OS rate (33%) with sotorasib was higher versus docetaxel (historically 14%).[2] In the phase III CodeBreaK 200 randomized controlled trial (ClinicalTrials.gov identifier: NCT04303780), sotorasib showed statistically significant improvement in PFS versus docetaxel in pretreated *KRAS* G12C-mutated advanced NSCLC, with a 34% decrease in the relative risk of disease progression or death with sotorasib (HR 0.66; $P = .0017$).[25] There was no OS difference, although the study was not powered for OS, and docetaxel arm crossover was permitted[25]; improved quality of life with sotorasib was observed.[25] These findings are encouraging, considering historically poor standard-of-care chemotherapy outcomes.

Long-term benefit with sotorasib was associated with lower baseline ctDNA levels, consistent with ctDNA prognostic roles across therapeutics.[26-28] Prolonged benefit was observed across *KRAS* G12C VAF levels, PD-L1 expression, and a proportion of patients with *STK11* and/or *KEAP1* comutations. However, consistent with studies of other therapies,[29,30] *KEAP1* mutation was negatively prognostic overall. Relatively small sample sizes with available biomarker data were challenging; additional analyses evaluating prognostic and predictive impact of baseline and postprogression genomic alterations are warranted. International collaboration and data sharing are key to uncovering *KRAS*-mutant cancer molecular complexities.[31-33]

In this long-term analysis, oral once-daily sotorasib demonstrated favorable safety profile and durable efficacy across subgroups in *KRAS* G12C-mutated NSCLC.

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PRIOR PRESENTATION

Presented in part at the American Association of Cancer Research Annual Meeting, New Orleans, LA, April 8-13, 2022.

SUPPORT

Supported by Amgen Inc.

CLINICAL TRIAL INFORMATION

NCT03600883 (CodeBreaK100)

AUTHORS' DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST

Disclosures provided by the authors are available with this article at DOI https://doi.org/10.1200/JCO.22.02524.

DATA SHARING STATEMENT

Qualified researchers may request data from Amgen clinical studies. Complete details are available at the following: http://www.amgen.com/datasharing.

AUTHOR CONTRIBUTIONS

Conception and design: All authors
Provision of study materials or patients: All authors
Collection and assembly of data: All authors
Data analysis and interpretation: All authors
Manuscript writing: All authors
Final approval of manuscript: All authors
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ACKNOWLEDGMENT

The authors thank the patients and their families for participating in this trial, as well as Lisa R. Denny, PhD, and Lee B. Hohaia, PharmD (ICON, Blue Bell, PA), whose work was funded by Amgen Inc, for medical writing assistance in the preparation of this manuscript. The authors thank Agnes Ang, PhD, who contributed to the biomarker analysis presented in this work, Maya Shehayeb, PharmD, and Jennifer Martucci for operational planning assistance, Bob Dawson for graphics assistance, Liz Leight, PhD, and Brittany L. Phillips, PhD, for medical writing support (all employed by Amgen Inc, Thousand Oaks, CA).

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AUTHORS' DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST

Long-Term Outcomes and Molecular Correlates of Sotorasib Efficacy in Patients With Pretreated *KRAS* G12C-Mutated Non–Small-Cell Lung Cancer: 2-Year Analysis of CodeBreaK 100

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Consulting or Advisory Role: AstraZeneca, Mirati Therapeutics, Lilly, Amgen
Research Funding: Amgen (Inst), AstraZeneca (Inst), Mirati Therapeutics (Inst), Lilly (Inst), Sanofi (Inst), Bioatla (Inst), Regeneron (Inst), Iovance Biotherapeutics (Inst), Revolution Medicines (Inst)

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Consulting or Advisory Role: Bristol Myers Squibb, Merck, AstraZeneca/MedImmune, GlaxoSmithKline, Amgen, Elevation Oncology, Merus, Taiho Oncology
Research Funding: Genentech (Inst), Trovagene (Inst), Eisai (Inst), OncoPlex Diagnostics (Inst), Alkermes (Inst), NantWorks (Inst), Genoptix (Inst), Altor BioScience (Inst), Merck (Inst), Bristol Myers Squibb (Inst), Atreca (Inst), Heat Biologics (Inst), Leap Therapeutics (Inst), RSIP Vision (Inst), GlaxoSmithKline (Inst)

Gerald S. Falchook
Employment: Sarah Cannon Research Institute, HealthONE
Honoraria: Rocky Mountain Oncology Society
Consulting or Advisory Role: Fujifilm (Inst), EMD Serono, Silicon Therapeutics (Inst), Navire (Inst), Turning Point Therapeutics (Inst), Silicon Therapeutics (Inst), Predicine (Inst), Inspirna (Inst), Regeneron (Inst), Jubilant Pharmaceuticals (Inst), BostonGene (Inst), BostonGene (Inst), AbbVie (Inst), Teon Therapeutics (Inst), Merck (Inst)
Speakers' Bureau: Total Health Conferencing
Research Funding: Millennium (Inst), EMD Serono (Inst), Celgene (Inst), MedImmune (Inst), Genmab (Inst), Vegenics (Inst), Novartis (Inst), AstraZeneca (Inst), Incyte (Inst), ARMO BioSciences (Inst), Kolltan Pharmaceuticals (Inst), 3-V Biosciences (Inst), AbbVie (Inst), Aileron Therapeutics (Inst), DelMar Pharmaceuticals (Inst), eFFECTOR Therapeutics (Inst), Strategia Therapeutics (Inst), Fujifilm (Inst), Hutchison MediPharma (Inst), Regeneron (Inst), Biothera (Inst), Curegenix (Inst), Curis (Inst), Lilly (Inst), Jounce Therapeutics (Inst), OncoMed (Inst), Precision Oncology (Inst), Syndax (Inst), Taiho Pharmaceutical (Inst), Tesaro (Inst), Takeda (Inst), BeiGene (Inst), Ignyta (Inst), Merck (Inst), Rgenix (Inst), Tarveda Therapeutics (Inst), Tocagen (Inst), Loxo (Inst), Jacobio (Inst), Ciclomed (Inst), miRNA Therapeutics (Inst), Celldex (Inst), ADC Therapeutics (Inst), Amgen (Inst), Exelixis (Inst), Bioatla (Inst), Turning Point Therapeutics (Inst), Ribon Therapeutics (Inst), Cyteir (Inst), Xencor (Inst), Daiichi (Inst), Epizyme (Inst), Abbisko (Inst), Prelude Therapeutics (Inst), Poseida (Inst), Oncorus (Inst), Synthorx (Inst), BioInvent (Inst), Sapience Therapeutics (Inst), Bicycle Therapeutics (Inst), Silicon Therapeutics (Inst), PureTech (Inst), Immunogen/MacroGenics (Inst), IgM Biosciences (Inst), Navire (Inst), TeneoBio (Inst), Erasca, Inc (Inst), RasCal (Inst), Boehringer Ingelheim (Inst), Pyramid Biosciences (Inst), Samumed (Inst), ABL Bio (Inst), Freenome (Inst), Artios (Inst), NiKang Therapeutics (Inst), Molecular Templates (Inst), Sirnaomics (Inst), Accutar Biotech (Inst), Relay Therapeutics (Inst), Simcha Therapeutics (Inst), Black Diamond Therapeutics (Inst), Seagen (Inst), Jubilant Pharmaceuticals (Inst), Metabomed (Inst), Agenus (Inst), Tallac Therapeutics (Inst), Zhuhai Yufan Biotechnologies (Inst), Mirati Therapeutics (Inst), Immunitas (Inst), Jazz Pharmaceuticals (Inst), Bayer (Inst)
Patents, Royalties, Other Intellectual Property: Handbook of Targeted Cancer Therapy
Travel, Accommodations, Expenses: Millennium, Sarah Cannon Research Institute, EMD Serono, Bristol Myers Squibb, Fujifilm, Amgen, Synthorx/Sanofi

Antoine Italiano
Honoraria: Bayer, Daiichi Sankyo, Lilly, Epizyme, Novartis, Roche, Ipsen
Consulting or Advisory Role: Roche, Daiichi Sankyo, Immune Design, Epizyme, Bayer, Lilly
Research Funding: Roche, Bayer, AstraZeneca/MedImmune, PharmaMar, MSD Oncology, Merck Serono
Patents, Royalties, Other Intellectual Property: Bristol Myers Squibb

Jürgen Wolf
Honoraria: AbbVie, AstraZeneca, Bristol Myers Squibb, Boehringer Ingelheim, MSD, Novartis, Roche, Amgen, Bayer, Blueprint Medicines, Chugai Pharma Europe, Daiichi Sankyo Europe GmbH, Ignyta, Janssen, Lilly, Loxo, Loxo/Lilly, Pfizer, Seagen, Takeda, Nuvalent, Inc
Consulting or Advisory Role: AbbVie, AstraZeneca, Bristol Myers Squibb, Boehringer Ingelheim, Chugai Pharma, Ignyta, Lilly, MSD Oncology, Novartis, Pfizer, Roche, Janssen, Loxo/Lilly, Blueprint Medicines, Amgen, Takeda, Amgen, Bayer, Blueprint Medicines, Daiichi Sankyo Europe GmbH, Seagen, Nuvalent, Inc
Research Funding: Bristol Myers Squibb, Novartis, Pfizer, Janssen
Travel, Accommodations, Expenses: Bristol Myers Squibb, Janssen, Novartis, Pfizer

Adrian G. Sacher
Research Funding: AstraZeneca, Genentech/Roche, Bristol Myers Squibb
Uncompensated Relationships: Genentech/Roche, AstraZeneca

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Honoraria: AstraZeneca Japan, Chugai Pharma, Lilly Japan, Ono Pharmaceutical, MSD K.K, Pfizer, Boehringer Ingelheim, Roche, Takeda, Yakult Honsha
Research Funding: AstraZeneca Japan (Inst), Lilly Japan (Inst), Chugai Pharma (Inst), Ono Pharmaceutical (Inst), MSD K.K (Inst), Pfizer (Inst), Amgen (Inst), Boehringer Ingelheim (Inst), Merck (Inst)

Suresh S. Ramalingam
Consulting or Advisory Role: GlaxoSmithKline
Research Funding: AbbVie (Inst), Bristol Myers Squibb (Inst), Pfizer (Inst), Merck (Inst), AstraZeneca/MedImmune (Inst), Vertex (Inst), Takeda (Inst), EMD Serono (Inst), Genmab (Inst), Advaxis (Inst), Amgen (Inst)
Travel, Accommodations, Expenses: AstraZeneca
Other Relationship: American Cancer Society

Dong-Wan Kim
Research Funding: Alpha Biopharma (Inst), AstraZeneca/MedImmune (Inst), Hanmi (Inst), Janssen (Inst), Merus (Inst), Mirati Therapeutics (Inst), MSD (Inst), Novartis (Inst), Ono Pharmaceutical (Inst), Pfizer (Inst), Roche/Genentech (Inst), Takeda (Inst), TP Therapeutics (Inst), Xcovery (Inst), Yuhan (Inst), Boehringer Ingelheim (Inst), Amgen (Inst), Daiichi Sankyo (Inst), Chong Kun Dang Pharmaceutical (Inst), BridgeBio Pharma (Inst), GlaxoSmithKline (Inst), Merck (Inst), inno.N (Inst)

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Consulting or Advisory Role: Roche, AstraZeneca/MedImmune, Bristol Myers Squibb Foundation, MSD Oncology, Pfizer, Novartis, Astellas Pharma, Amgen, Lilly
Speakers' Bureau: Lilly, AstraZeneca/MedImmune
Travel, Accommodations, Expenses: Roche, Takeda

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This author is a member of the *Journal of Clinical Oncology* Editorial Board. Journal policy recused the author from having any role in the peer review of this manuscript.
Consulting or Advisory Role: BeiGene, Amgen (Inst), Pierre Fabre, Bayer, GlaxoSmithKline, Merck KGaA, Boehringer Ingelheim, Roche/Genentech, Daiichi Sankyo Europe GmbH, Novartis, Pfizer
Research Funding: Roche (Inst), GlaxoSmithKline (Inst), Novartis (Inst), Bionomics (Inst), BeiGene (Inst), Lilly (Inst), Bristol Myers Squibb (Inst), AstraZeneca/MedImmune (Inst)

Martin Schuler
Honoraria: Boehringer Ingelheim, Bristol Myers Squibb, Novartis, Amgen, Janssen-Cilag
Consulting or Advisory Role: AstraZeneca, Boehringer Ingelheim, Bristol Myers Squibb, Novartis, Roche, Takeda, Amgen, GlaxoSmithKline, Merck Serono, Sanofi, Janssen Oncology
Research Funding: Bristol Myers Squibb (Inst), AstraZeneca (Inst)
Patents, Royalties, Other Intellectual Property: Highly sensitive method for mutation detection by PCR (Inst)

Pascale Tomasini
Consulting or Advisory Role: AstraZeneca, Roche, Bristol Myers Squibb Foundation, Takeda, Amgen, Janssen
Travel, Accommodations, Expenses: Bristol Myers Squibb/Pfizer, AstraZeneca, Takeda

David S. Hong
Stock and Other Ownership Interests: OncoResponse, Telperian, MolecularMatch
Consulting or Advisory Role: Bayer, Guidepoint Global, Gerson Lehrman Group, Alphasights, Axiom Biotechnologies, Medscape, Numab, Pfizer, Takeda, Trieza Therapeutics, WebMD, Infinity Pharmaceuticals, Amgen, Adaptimmune, Boxer Capital, EcoR1 Capital, Tavistock Life Sciences, Baxter, COG, Genentech, GroupH, Janssen, Acuta, HCW Precision, Prime Oncology, ST Cube, Alkermes, AUM Biosciences, Bridgebio, Cor2Ed, Gilead Sciences, Immunogen, Liberum, Oncologia Brasil, Pharma Intelligence, Precision Oncology Experimental Therapeutics, Turning Point Therapeutics, ZIOPHARM Oncology, Cowen, Gennao Bio, MedaCorp, YingLing Pharma, RAIN
Research Funding: Genentech (Inst), Amgen (Inst), Daiichi Sankyo (Inst), Adaptimmune (Inst), AbbVie (Inst), Bayer (Inst), Infinity Pharmaceuticals (Inst), Kite, a Gilead Company (Inst), MedImmune (Inst), National Cancer Institute (Inst), Fate Therapeutics (Inst), Pfizer (Inst), Novartis (Inst), Numab (Inst), Turning Point Therapeutics (Inst), Kyowa (Inst), Loxo (Inst), Merck (Inst), Eisai (Inst), Genmab (Inst), Mirati Therapeutics (Inst), Mologen (Inst), Takeda (Inst), AstraZeneca (Inst), Navire (Inst), VM Pharma (Inst), Erasca, Inc (Inst), Bristol Myers Squibb (Inst), Adlai Nortye (Inst), Seagen (Inst), Deciphera (Inst), Pyramid Biosciences (Inst), Lilly (Inst), Endeavor BioMedicines (Inst), F. Hoffmann LaRoche (Inst), Ignyta (Inst), Teckro (Inst), TCR2 Therapeutics (Inst)
Travel, Accommodations, Expenses: Genmab, Society for Immunotherapy of Cancer, Bayer Schering Pharma, ASCO, AACR, Telperian

Piro Lito
Leadership: Frontier Medicines
Consulting or Advisory Role: Black Diamond Therapeutics, Repare Therapeutics, AmMax Bio, Revolution Medicines
Speakers' Bureau: Boehringer Ingelheim
Research Funding: Mirati Therapeutics (Inst), Revolution Medicines (Inst), Amgen (Inst), Boehringer Ingelheim (Inst), Virtec Pharmaceuticals (Inst)
Patents, Royalties, Other Intellectual Property: I am listed as an inventor on a patent application filed by MSKCC that describes an approach to treat *BRAF* mutant cancers (Inst), I am listed as an inventor on a patent application filed by MSKCC that describes an approach to treat *KRAS* mutant cancers (Inst)

Qui Tran
Employment: Amgen
Stock and Other Ownership Interests: Amgen

Simon Jones
Employment: Amgen
Stock and Other Ownership Interests: Amgen
Travel, Accommodations, Expenses: Amgen

Abraham Anderson
Employment: Amgen
Stock and Other Ownership Interests: Amgen
Patents, Royalties, Other Intellectual Property: I am listed as an inventor on several Amgen patents. I do not receive royalties on these patents
Travel, Accommodations, Expenses: Amgen

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Employment: Amgen
Stock and Other Ownership Interests: Amgen

Wendy Snyder
Employment: Amgen
Stock and Other Ownership Interests: Amgen
Travel, Accommodations, Expenses: Amgen

Ferdinandos Skoulidis
Stock and Other Ownership Interests: Moderna Therapeutics, BioNTech
Honoraria: McGill Universite de Montreal, ESMO, RV Mais, Moving Innovation and Technology, Physicans' Education Resource
Consulting or Advisory Role: Amgen, Intellisphere, Navire, BeiGene, Medscape, Calithera Biosciences, Tango Therapeutics, Guardant Health, Novartis
Research Funding: Amgen (Inst), AIMM Therapeutics (I), Mirati Therapeutics (Inst), Boehringer Ingelheim (Inst), Merck (Inst), Novartis (Inst), Pfizer (Inst)

Bob T. Li
Research Funding: Roche/Genentech (Inst), AstraZeneca (Inst), Daiichi Sankyo (Inst), Hengrui Therapeutics (Inst), Amgen (Inst), Lilly (Inst), MORE Health (Inst), Bolt Biotherapeutics (Inst), Ambrx (Inst)
Patents, Royalties, Other Intellectual Property: US62/514,661 (Inst), US62/685,057 (Inst), Karger Publishers—Book royalty, Shanghai Jiao Tong University Press—Book royalty
Travel, Accommodations, Expenses: MORE Health, Jiangsu Hengrui Medicine
Uncompensated Relationships: Amgen, AstraZeneca, Genentech, Lilly, Boehringer Ingelheim, Daiichi Sankyo

No other potential conflicts of interest were reported.