

# Comparative Effectiveness of Teclistamab vs Real-world Physician's Choice of Carfilzomib- and/or Pomalidomide-based Regimens in LocoMMotion and MoMMent in TCE RRMM

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Teclistamab showed superior effectiveness versus real-world physician's choice of carfilzomib- and/or pomalidomide-based regimens, reinforcing its value in improving clinical outcomes and delaying progression in TCE RRMM

Patients treated with teclistamab in MajesTEC-1 had significant improvements in all evaluated efficacy outcomes when compared with eligibility-matched patient cohorts treated with carfilzomib and/or pomalidomide regimens

Teclistamab showed a median DOR nearly 5 times longer than carfilzomib/pomalidomide and almost 2 times longer TTNT, supporting optimized outcomes when used in earlier lines of therapy.

These results highlight teclistamab as a highly effective standard of care for patients with TCE RRMM, who have historically had limited therapeutic options and poor outcomes

## Introduction

- Patients with triple-class exposed (TCE) relapsed/refractory multiple myeloma (RRMM) display suboptimal outcomes, as shown in a pooled analysis from the prospective, noninterventional, multinational LocoMMotion and MoMMent studies<sup>1</sup>
- MajesTEC-1 was a single-arm phase 1/2 study evaluating teclistamab, a B-cell maturation antigen x CD3 bispecific antibody, in patients with RRMM who were TCE<sup>2</sup>
- There are no head-to-head data versus carfilzomib/pomalidomide in TCE patients. These regimens are still used in practice despite poor outcomes, highlighting the need for alternatives.
- We compared efficacy outcomes of patients who received teclistamab in MajesTEC-1 with those treated with carfilzomib and/or pomalidomide-based regimens in the pooled analysis from LocoMMotion and MoMMent

## Results

### BASELINE CHARACTERISTICS

- After reweighting, baseline characteristics were balanced in both cohorts (Table 1)

Table 1. Baseline characteristics after reweighting.

Baseline characteristics	Teclistamab (n=165)	RWPC (n=166)
<b>Refractory status</b>		
≤ Double refractory	37 (22.4%)	34 (20.4%)
Triple refractory	20 (12.1%)	19 (11.6%)
Quadruple refractory	58 (35.2%)	52 (31.5%)
Penta refractory	50 (30.3%)	61 (36.5%)
<b>International Staging System</b>		
I	87 (52.7%)	88 (52.8%)
II	58 (35.2%)	60 (36.2%)
III	20 (12.1%)	18 (11.1%)
<b>Time to progression prior line</b>		
≥ 3 months	115 (69.7%)	117 (70.7%)
<b>Extramedullary disease</b>	28 (17%)	24 (14.3%)
<b>N prior lines</b>		
≤ 4	78 (47.3%)	66 (39.8%)
> 4	87 (52.7%)	100 (60.2%)
<b>Rears since diagnosis</b>		
< 6 Years	81 (49.1%)	73 (44.2%)
≥ 6 Years	84 (50.9%)	93 (55.8%)
<b>Average duration of prior lines, months</b>		
<10	41 (24.8%)	46 (27.8%)
10 to 14	50 (30.3%)	51 (30.7%)
≥15	74 (44.8%)	69 (41.6%)
<b>Age &lt;65 Years</b>	86 (52.1%)	89 (53.9%)
<b>Hemoglobin &lt;12 g/dL</b>	124 (75.2%)	128 (77.3%)
<b>LDH &lt; 280 U/L</b>	123 (74.5%)	120 (72.2%)
<b>Creatinine clearance, mL/min</b>		
<60	44 (26.7%)	40 (24%)
60-<90	73 (44.2%)	80 (48.4%)
<b>ECOG performance status</b>		
0	55 (33.3%)	62 (37.2%)
1-2	110 (66.7%)	104 (62.8%)
<b>Female sex</b>	69 (41.8%)	81 (48.9%)
<b>IgG myeloma</b>	91 (55.2%)	82 (49.2%)
<b>Prior transplant</b>	135 (81.8%)	138 (83.1%)

Teclistamab: observed; RWPC: reweighted

- After reweighting, all standardized mean differences were close to zero, indicating balance in the distribution of baseline characteristics across the two cohorts.
- Likewise, there was considerable overlap in propensity scores between the two cohorts after reweighting, indicating comparability between the two cohorts

## References

1. Mateos MV, et al. Real-Life Outcomes in Triple-Class Exposed (TCE) Relapsed/Refractory Multiple Myeloma (RRMM) Treated With Carfilzomib and/or Pomalidomide-Based Regimens in the LocoMMotion and MoMMent Studies. Clin Lymph Myeloma Leuk 2024; 24:S270-S271 (Poster 409).
2. Moreau P, et al. Teclistamab in Relapsed or Refractory Multiple Myeloma. N Engl J Med 2022;387:495-505.
3. Moreau P, et al. Comparative Effectiveness of Teclistamab Versus Real-World Physician's Choice of Therapy in LocoMMotion and MoMMent in Triple-Class Exposed Relapsed/Refractory Multiple Myeloma. Adv Ther 2024;41:696-715.

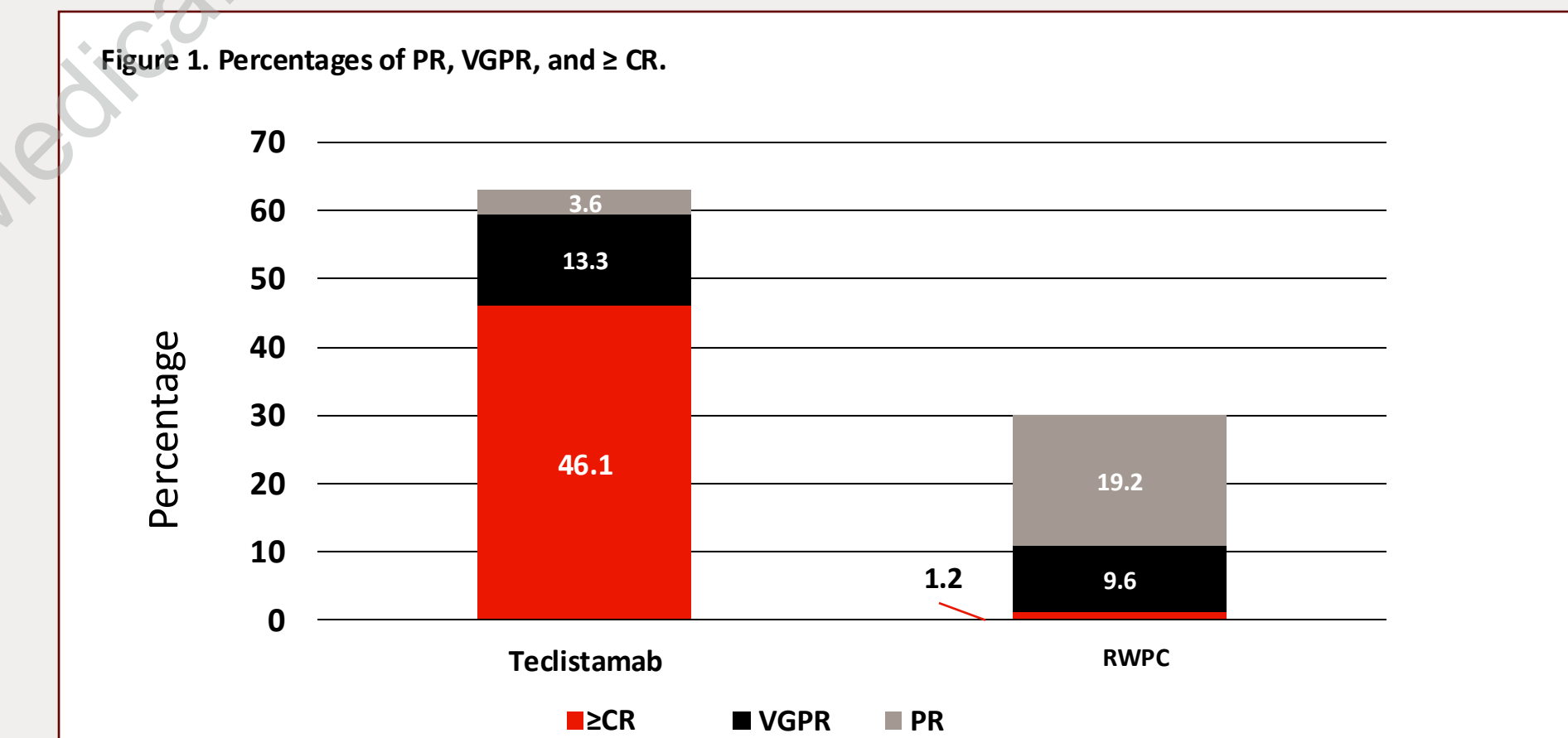
## Methods

- We used individual patient data from MajesTEC-1 (n=165; clinical cut-off, Aug 2023) and from patients treated with carfilzomib and/or pomalidomide regimens in LocoMMotion (n=131; clinical cut-off, Oct 22) and MoMMent (n=35; clinical cut-off, Aug 24)
- All patients included in the analysis were aligned with key inclusion and exclusion criteria from MajesTEC-1
- We pooled patients from LocoMMotion and MoMMent (henceforward, Real-World Physician's Choice of carfilzomib - and/or pomalidomide-based regimens [RWPC]) for comparisons with those from MajesTEC-1
- We adjusted for imbalances in prognostic baseline covariates using inverse probability of treatment weighting, using the average treatment effect in the treated (ATT) approach<sup>3</sup>

## BINARY ENDPOINTS

Rates of partial response (PR), very good partial response (VGPR), and ≥ complete response (CR) (Figure 1)

- Overall response rates (ORR) were 63.0% for teclistamab and 30.0% for RWPC
- Rates of ≥ VGPR were 59.4% for teclistamab and 10.8% for RWPC
- Rates of ≥ CR were 46.1% for teclistamab and 1.2% for RWPC



## Relative risks (RRs) for ORR, the rate of ≥ VGPR, and the rate of ≥ CR

- Teclistamab patients were 2.1, 5.5 and 37.6 times more likely to achieve ORR, ≥ VGPR and ≥ CR respectively (Table 2)

Table 2. RRs of ORR, ≥ VGPR, and ≥ CR (teclistamab vs RWPC, with values >1.00 indicating benefit from teclistamab).

Outcome	RR for teclistamab vs RWPC (95% CI)	P value
ORR	2.10 (1.30 – 3.40)	0.0024
≥ VGPR	5.50 (2.75 – 10.98)	<0.001
≥ CR	37.61 (9.28 – 152.40)	<0.001

- We used multivariable logistic regression to estimate propensity scores (adjusted for prognostic baseline characteristics), transforming them into ATT weights assigned to the RWPC
- We then compared MajesTEC-1 vs RWPC patients regarding two groups of endpoints using the following multivariable methods:
  - For binary endpoints (overall response rate [ORR]; ≥ very good partial response [VGPR]; and ≥ complete response [CR]), we used logistic regression models to estimate the relative effect of teclistamab vs RWPC expressed as relative risks (RR) and 95% confidence intervals (CI)
  - For time-to-event endpoints (duration of response [DOR], progression-free survival [PFS], time-to-next-treatment [TTNT], and overall survival [OS]), we used weighted Cox proportional hazards models to estimate hazard ratios (HR) and 95% CIs
- We considered two-sided P values <0.05 to indicate statistical significance

## TIME TO EVENT ENDPOINTS

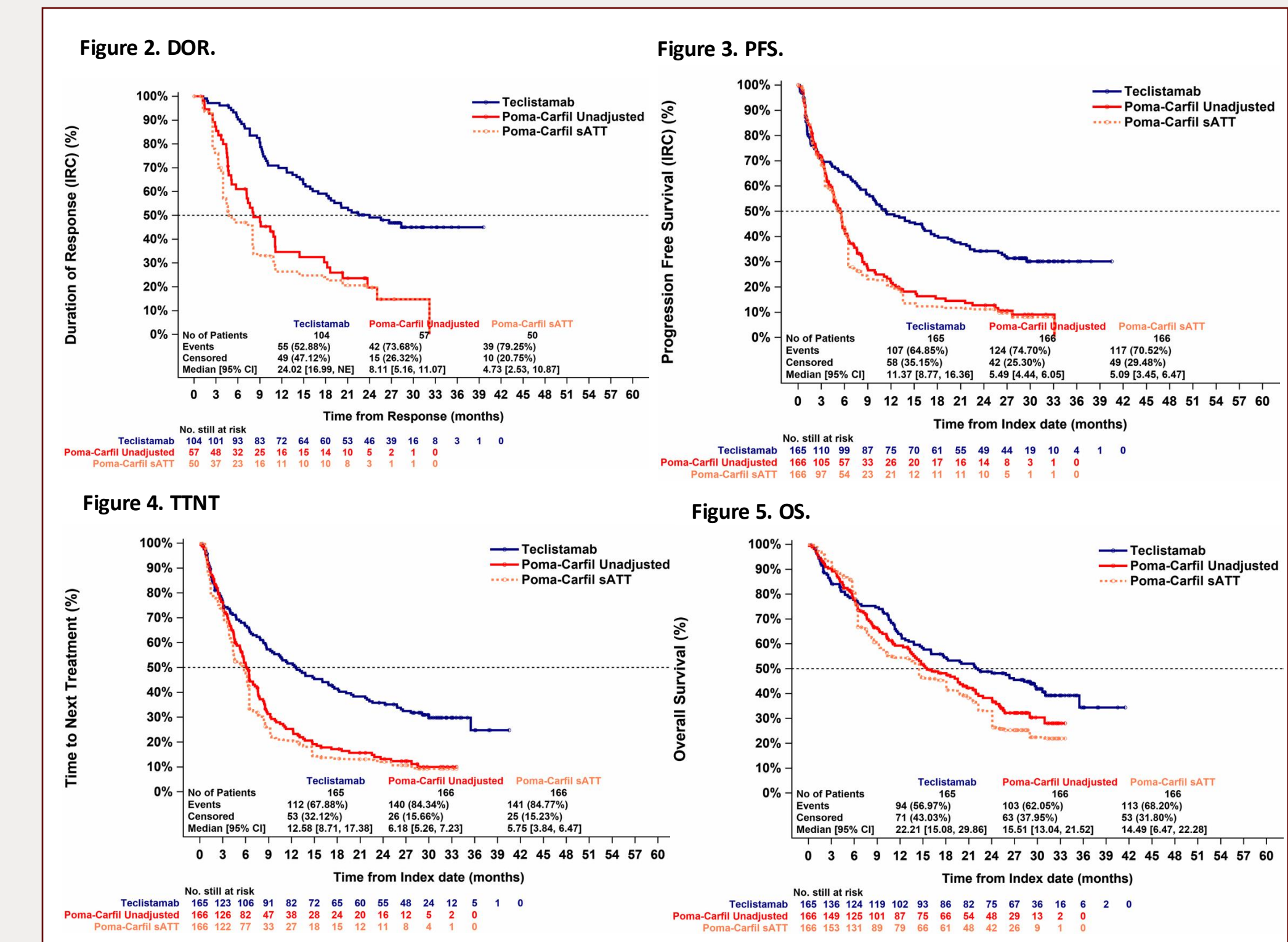
HRs for DOR, PFS, and OS

- In weighted Cox models, teclistamab use was significantly associated with improved DOR, PFS, and OS, when compared with RWPC (Table 3)

Table 3. HRs for DOR, PFS, and OS (teclistamab vs RWPC, with values <1.00 indicating benefit from teclistamab).

Outcome	HR for teclistamab vs RWPC (95% CI)	P value
DOR	0.31 (0.19-0.53)	<0.001
PFS	0.50 (0.36-0.68)	<0.001
OS	0.66 (0.47-0.93)	0.0173
TTNT	0.48 (0.36-0.66)	<0.001

Kaplan-Meier curves and medians for DOR (Figure 2), PFS by independent review committee (Figure 3), TTNT (Figure 4), and OS (Figure 5)



Please scan QR code <https://www.congresshub.com/Oncology/IMS2025/Teclistamab/Mateos>

- Poster
- Narrated poster video
- Supplementary material

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**Disclosures**  
Philippe Moreau: served in a consulting/advisory role and has received honoraria from AbbVie, Amgen, Celgene, GlaxoSmithKline, Janssen, Oncopptides and Sanofi. María-Victoria Mateos: reports receiving honoraria for lectures and advisory board participation from Johnson & Johnson, Bristol Myers Squibb, Amgen, AbbVie, GSK, Sanofi, Pfizer, Kite, Menarini, and Oncopptides. Katja Weisel: has received honoraria and served as a consultant for AbbVie, Adaptive Biotechnologies, Amgen, AstraZenca, BiGene, Bristol Myers Squibb, Celcentric, GlaxoSmithKline, Janssen, Karyopharm, Oncopptides, Pfizer, Regeneron, Roche Pharma, Sanofi, Stemline, and Takeda, has received honoraria from Novartis, and has received research grants to her institution from AbbVie, Amgen, Bristol Myers Squibb/Celgene, GlaxoSmithKline, Janssen, and Sanofi.