

## Therapy focus - Multiple myeloma pricing set to feel the heat



[Jacob Plieth](#)

The US FDA made a special effort to approve not one but three new multiple myeloma treatments before the ASH meeting last December, cementing the status of this indication as one of the best-served haematological cancers.

But better treatments come at a price, and that for multiple myeloma could spur a payer backlash given that many new drugs are expensive antibodies, and most need to be given against a backbone of Celgene's Revlimid - itself a costly drug (see tables below). This explains why a US economic institute focusing on drug cost-effectiveness has now trained its guns at multiple myeloma.

ICER, the Institute for Clinical and Economic Review, is an independent US organisation that does not have direct input into pricing. But its proposals are taken increasingly seriously, as shown by the severe discount at which Merck & Co priced its new hepatitis C offering last week ([Looking for a hep C price war? Merck just started it, January 29, 2016](#)).

Of course, it is relatively easy for payers to put their foot down against hepatitis C drug price inflation. In contrast, while much has been said about the spiralling costs of cancer treatment with MABs, cell therapies and combinations, so far this has had little effect.

But this could change: ICER will this Friday go public with [a draft report](#) for the Midwest Comparative Effectiveness Public Advisory Council, comparing the clinical and cost-effectiveness of relapsed multiple myeloma therapies.

### Ripe for scrutiny

Multiple myeloma is ripe for pricing scrutiny owing to the three recent approvals - Empliciti, Darzalex and Ninlaro - on the one hand, and the remarkable resilience of Revlimid on the other.

Ironically Revlimid is set to remain US patent-protected even beyond the 2025 expiry of the IP covering Celgene's follow-up drug Pomalyst. *EvaluatePharma* sellside estimates see Revlimid still growing in 2020 to bring in \$10.2bn, 13 years after its first launch.

Empliciti was approved on the strength of studies showing its benefit in the second-line setting and beyond, when added to Revlimid. Ninlaro, too, was added on top of the Celgene drug.

| Multiple myeloma combos in phase III & IV trials |              |              |                  |
|--|--------------|--------------|------------------|
| Backbone   | Combo drug 1 | Combo drug 2 | Number of trials |
| Revlimid + dexamethasone                         | Empliciti    | -            | 3                |
| Revlimid + dexamethasone                         | Velcade      | -            | 2                |
| Revlimid + dexamethasone                         | Darzalex     | -            | 2                |
| Revlimid + dexamethasone                         | Ninlaro      | -            | 2                |
| Velcade + dexamethasone                          | Pomalyst     | -            | 1                |
| Revlimid + dexamethasone                         | Ninlaro      | -            | 1                |
| Velcade + dexamethasone                          | Darzalex     | -            | 1                |
| Velcade + melphalan + prednisone                 | Darzalex     | -            | 1                |
| Revlimid + dexamethasone                         | Velcade      | Empliciti    | 1                |
| Pomalyst + dexamethasone                         | Keytruda     | -            | 1                |

For now Darzalex is approved in fourth-line use, but trials are ongoing to move it towards the front line – obviously in combination with Revlimid. And the way things are moving can be gleaned from comments by Dr Saad Usmani, of the Levine Cancer Institute, who at last year’s Asco floated the idea of even combining Darzalex with Empliciti.

Behind Darzalex comes a swarm of phase II and III multiple myeloma projects, many of them biologicals, including anti-CD38 Darzalex follow-ons from Sanofi (isatuximab) and Morphosys (MOR202). It is not yet clear where the mid-stage assets might fit in, but companies are likely to shoot eventually for early lines of treatment, implying a Revlimid-containing regimen.

With the Celgene drug patent-protected until around 2027 it is little wonder that ICER has turned to multiple myeloma, looking both at existing and newer treatments; cynics will note that it is not in industry’s interest to run head-to-head trials to determine true clinical effectiveness.

In gauging biopharma’s response to possible price pressure it is important to note Celgene’s presence in earlier-stage R&D too. This probably gives the company an edge in any negotiations, though some curbing of spiralling treatment costs is probably unavoidable.

| Selected multiple myeloma pipeline |              |                      |                   |
|------------------------------------|--------------|----------------------|-------------------|
| Product                            | Company      | Pharmacology         | 2020e sales (\$m) |
| <i>Marketed</i>                    |              |                      |                   |
| Revlimid                           | Celgene      | Immunomodulator      | 10,183            |
| Pomalyst                           | Celgene      | Immunomodulator      | 2,104             |
| Kyprolis                           | Amgen        | Proteasome inhibitor | 1,960             |
| Ninlaro                            | Takeda       | Proteasome inhibitor | 1,498             |
| Darzalex                           | J&J/Genmab   | Anti-CD38 MAb        | 1,166             |
| Velcade                            | J&J/Takeda   | Proteasome inhibitor | 488               |
| Farydak                            | Novartis     | HDAC inhibitor       | 277               |
| <i>Approved</i>                    |              |                      |                   |
| Empliciti                          | AbbVie/BMS   | Anti-SLAMF7 MAb      | 212               |
| <i>Phase III</i>                   |              |                      |                   |
| Aplidin                            | Roche/Zeltia | Apoptosis inducer    | 64                |

|   |                          |   |     |
|---|--------------------------|---|-----|
| Filanesib   | Array BioPharma          | Kinesin spindle protein inhibitor                                       | -   |
| Zolinza   | Merck & Co               | HDAC inhibitor  | 40  |
| Keytruda  | Merck & Co               | Anti-PD-1 MAb   | NA  |
| Mozobil   | Sanofi                   | CXCR4 antagonist  | 113 |
| Masican   | AB Science               | c-kit tyrosine kinase & PDGFr inhibitor                                 | -   |
| PVX-410   | OncoPep                  | Cancer vaccine  | -   |
| <i>Phase II*</i>  |                          |   |     |
| Isatuximab  | Sanofi                   | Anti-CD38 MAb   | 76  |
| MOR202  | MorphoSys                | Anti-CD38 MAb   | -   |
| Sotatercept   | Celgene/Acceleron Pharma | ACT2RB fusion protein   | -   |
| Istodax   | Celgene                  | HDAC inhibitor  | 118 |
| CC-223  | Celgene                  | PI3K & mTOR inhibitor   | -   |
| Ricolinostat  | Celgene/Acetylon         | HDAC6 inhibitor   | -   |
| Marizomib (IV)  | Celgene_Triphase         | Proteasome inhibitor  | -   |
| BHQ880  | Novartis                 | Anti-DKK-1 MAb  | -   |
| Milatuzumab-Dox   | Immunomedics             | Anti-CD74 MAb-doxorubicin conjugate                                     | -   |
| Indatuximab Ravnansine  | ImmunoGen                | Anti-CD138 MAb-DM4 maytansinoid conjugate                               | -   |
| Tabalumab   | Lilly                    | Anti-BAFF MAb   | -   |
| DKN-01  | Lilly                    | Anti-DKK-1 MAb  | -   |
| HGS-ETR1  | AstraZeneca              | Anti-TRAIL-R1 MAb   | -   |
| PAT-SM6   | Patrys                   | Anti-GRP78 MAb  | -   |
| ALT-801   | Altor BioScience         | p53-specific single-chain T-cell receptor (p53-TCR)/IL-2 fusion protein | -   |
| ALT-803   | Altor BioScience         | IL-15 super agonist/IL-15R $\alpha$ -Fc fusion protein complex          | -   |
| GSK3377794  | GSK/Adaptimmune          | Anti-NY-ESO-1 T cell therapy  | -   |
| ImMucin   | Vaxil BioTherapeutics    | Anti-MUC1 vaccine   | -   |
| <i>Note: *phase II comprises Celgene projects and biologicals only.</i> |                          |   |     |

To contact the writers of this story email Jacob Plieth or Edwin Elmhirst in London at [news@epvantage.com](mailto:news@epvantage.com) or follow [@JacobPlieth](https://twitter.com/JacobPlieth) or [@EPVantage](https://twitter.com/EPVantage) on Twitter