pCODR PAN-CANADIAN ONCOLOGY DRUG REVIEW

pCODR EXPERT REVIEW COMMITTEE (pERC)
INITIAL RECOMMENDATION

The pan-Canadian Oncology Drug Review (pCODR) was established by Canada's provincial and territorial Ministries of Health (with the exception of Quebec) to assess cancer drug therapies and make recommendations to guide drug-funding decisions. The pCODR process brings consistency and clarity to the cancer drug assessment process by looking at clinical evidence, cost-effectiveness and patient perspectives.

Providing Feedback on this Initial Recommendation
Taking into consideration feedback from eligible stakeholders, the pERC will make a Final Recommendation. Feedback must be provided in accordance with *pCODR Procedures*, which are available on the pCODR website. The Final Recommendation will be posted on the pCODR website once available, and will supersede this Initial Recommendation.

Drug:
Lenalidomide (Revlimid)

Submitted Funding Request:
Lenalidomide in combination with low-dose dexamethasone, for treatment of newly diagnosed multiple myeloma patients who are not candidates for transplantation.

Submitted By:
Celgene Inc.

Manufactured By:
Celgene Inc.

NOC Date:
N/A

Submission Date:
May 4, 2015

Initial Recommendation Issued:
October 1, 2015

pERC RECOMMENDATION

The pCODR Expert Review Committee (pERC) recommends funding lenalidomide (Revlimid) as an option for first line treatment of patients with multiple myeloma who are not eligible for autologous stem cell transplantation conditional on the cost effectiveness being improved to an acceptable level. Treatment should be in combination with dexamethasone for patients with an ECOG PS ≤ 2 and until disease progression.

The Committee made this recommendation because continuous lenalidomide plus dexamethasone (con-Ld) treatment demonstrated a net clinical benefit when compared to melphalan, prednisone and thalidomide (MPT) treatment. The Committee concluded that there may also be a net clinical benefit of con-Ld compared to melphalan, prednisone and bortezomib (MPB), the relevant Canadian comparator; however, there is considerable uncertainty concerning the magnitude of benefit due to the lack of direct comparative evidence between MPT and MPB. Although there was a lengthy deliberation with various opinions expressed, the majority of pERC members considered that there may be a net clinical benefit with con-Ld compared to MPB, despite the lack of evidence from a head-to-head randomized controlled trial. pERC also noted that con-Ld has a different toxicity profile than MPB, which allows for continuous treatment and is an oral treatment which can be combined with other oral myeloma therapies. These attributes align with the patient value of having more accessible treatment options. However, pERC considered that con-Ld could not be considered cost effective compared to MPB due to its' high cost and the uncertainty in the magnitude of clinical benefit.

POTENTIAL NEXT STEPS FOR STAKEHOLDERS

Pricing Arrangements to Improve Cost-Effectiveness

Given that pERC was satisfied that there may be a net clinical benefit with con-Ld compared to MPB, jurisdictions may want to consider pricing arrangements and/or cost structures that would improve the cost-effectiveness of lenalidomide. pERC noted that uncertainty around the incremental benefit between the two treatments was the key driver affecting the submitted incremental cost-effectiveness estimates. Additionally, the cost of lenalidomide compared to bortezomib is very high and another key driver of the ICER estimates. Therefore, to offset the considerable uncertainty in the clinical effect estimates, pERC concluded that a substantial reduction would likely be required in order to improve cost effectiveness.

Additional Resources Required Due to Controlled Distribution

pERC noted that lenalidomide can only be obtained currently through a controlled distribution program and that expansion of lenalidomide use to the first line setting may require additional pharmacy and human resources to manage the controlled distribution.

SUMMARY OF pERC DELIBERATIONS

Myeloma is incurable in the majority of cases. In patients with newly diagnosed multiple myeloma who are ineligible for autologous stem-cell transplantation (ASCT), the median survival is 4-5 years. Standard treatment for patients includes melphalan, prednisone and thalidomide (MPT) or melphalan, prednisone and bortezomib (MPB). MPT is, however, not a relevant comparator for most Canadian jurisdictions as thalidomide is not readily available. Patients typically receive MPB, the current Canadian standard of care. pERC agreed that additional treatment options are needed with proven efficacy and tolerability for patients.

pERC's *Deliberative Framework* for drug funding recommendations focuses on four main criteria:	
CLINICAL BENEFIT	PATIENT-BASED VALUES
ECONOMIC EVALUATION	ADOPTION FEASIBILITY

The pCODR systematic review included three randomized controlled trials (RCT). Two open label (FIRST and MM-015) and one double blind (E1A06) RCT, all of which randomized patients to lenalidomide containing regimens. Based on the results of these studies, pERC concluded that there is a net clinical benefit to the use of continuous lenalidomide treatment as part of multi-agent therapy when compared to MPT. The FIRST study demonstrated a statistically significant improvement in progression-free survival and a trend in improvement of overall survival (OS) in favour of con-Ld when compared to MPT. In considering the results of the MM-015 and E1A06 studies, pERC agreed that these studies supported the results of the FIRST study. In discussing the available evidence further, pERC suggested that the benefit from lenalidomide is likely conferred by the maintenance or continuous use portion of the regimen. This is supported by results in the FIRST study which did not show any difference in efficacy between MPT and the Ld18 (lenalidomide plus dexamethasone for 18 cycles). pERC noted that the safety profile of con-Ld is manageable and enables the administration of treatment over a protracted period of time, unlike therapies, such as bortezomib or thalidomide. Patient quality of life was also significantly improved from baseline in both the FIRST and MM-015 studies while an improvement favouring continuous lenalidomide treatment was observed between the arms in the E1A06 study. Statistically significant improvements were however not measured between arms in the FIRST and E1A06 studies, while testing for statistical significance between treatment arms was not reported in the MM-015 study.

pERC discussed the relevance of studies making a comparison to MPT in the Canadian context and noted that most provinces, with the exception of two, do not fund MPT. pERC agreed that the MPT treatment regimen is not readily accessible to patients due to restrictions on the distribution of thalidomide. For the current review, pERC members agreed that MPB was the most relevant comparator. However, in the absence of a head to head trial comparing con-Ld to MPB, the relative efficacy and safety of these regimens and the magnitude of any potential difference between the two treatments remains uncertain. pERC discussed the results of a manufacturer submitted network meta-analysis and agreed that limitations in the analysis made it difficult to draw any firm conclusions on the comparative efficacy and safety between the two regimens. The Committee also discussed the feasibility and probability of further randomised controlled trials between con-Ld and MPB being conducted and concluded that they would not be undertaken. In considering the available evidence, pERC accepted the clinical opinion that continuous treatment is the preferable treatment approach for patients; however, the cumulative toxicity that develops with currently available treatments (MPT and/or MPB) is only tolerated by patients for a limited duration. Therefore, the option of using continuous treatment with anti-myeloma agents has not been possible prior to lenalidomide, which has a toxicity profile different from bortezomib and thalidomide. pERC discussed this paradigm shift in the treatment approach for multiple myeloma and agreed that the availability of con-Ld made continuous treatment possible. Various opinions were expressed during deliberations and each of the above factors was valued differently by pERC members. Following voting, the majority of pERC members considered that there was sufficient reason to recommend funding con-Ld. Taken together, and consistent with the conclusions on net clinical benefit of con-Ld compared with MPT, the body of evidence from the available studies supports the view that there may be a net clinical benefit of con-Ld compared to MPB in this setting although the magnitude of this benefit is uncertain.

pERC deliberated upon patient advocacy group input. pERC noted that patients valued having access to effective treatment options, greater accessibility and having a choice of therapies. pERC considered that the con-Ld regimen aligns with these patient values and ensures that patients in Canada have access to a treatment regimen that is entirely oral. pERC noted the importance of oral therapies to patients and their caregivers with respect to convenience and comfort of taking treatment at home. This is especially important when long travel distances are otherwise required to receive treatment and manage side effects.

pERC deliberated upon the cost-effectiveness of con-Ld compared with MPB, the most relevant comparator to the Canadian context, based on a submitted economic evaluation. pERC concluded that there was considerable uncertainty in the cost-effectiveness of con-Ld compared with MPB due to the absence of a study directly comparing the two treatment regimens and uncertainty in the results of both submitted network meta-analyses provided. In the absence of evidence to support the superiority of con-Ld over MPB, the EGP, in consultation with the CGP, provided a conservative estimate by setting all efficacy inputs to the economic model equal to zero between the two treatment regimens. pERC discussed the available evidence which suggested that the incremental benefit of con-Ld over MPB is unlikely to be zero. In the absence of comparative evidence, pERC acknowledged that there is considerable uncertainty in determining the true magnitude of benefit with con- Ld. pERC agreed that the cost-effectiveness estimate likely lies somewhere between the EGP's re-analysis results and the submitted estimates. pERC, therefore, concluded that the high cost of con-Ld in combination with uncertainty in the magnitude of the clinical benefit gave rise to a wide range of ICERs, most of which pERC considered to be not cost-effective.

pERC considered the feasibility of implementing a funding recommendation for con- Ld. pERC noted that the price of lenalidomide was the key driver of the cost-effectiveness estimates and that the cost for a 28-day cycle of lenalidomide was considerably higher than bortezomib which is now available as a generic drug at a substantially lower price. Patients are treated with lenalidomide until disease progression or unacceptable toxicity. Therefore, pERC concluded that a substantial reduction in drug price would be required as the potential budget impact of lenalidomide is likely to be significant. As an oral therapy, lenalidomide provides greater accessibility to patients compared to intravenous treatment with MPB. pERC however acknowledged that funding for oral therapies in some jurisdictions requires applications to pharmacare programs involving co-payments and deductibles which may in turn create a financial burden for patients and their families who do not have private insurance to cover the out of pocket cost of treatment.

EVIDENCE IN BRIEF

pERC deliberated upon a pCODR systematic review, other literature in the Clinical Guidance Report that provided clinical context, an evaluation of the manufacturer's economic model and budget impact analysis, guidance from pCODR clinical and economic review panels, input from one patient advocacy group (Myeloma Canada) and input from pCODR's Provincial Advisory Group.

OVERALL CLINICAL BENEFIT

pCODR review scope

The purpose of the review was to evaluate the safety and efficacy of lenalidomide (Revlimid) as part of combination therapy in the first-line treatment of patients with newly diagnosed multiple myeloma who are not candidates for stem cell transplant.

Studies included: Three randomized controlled trials assessing continuous treatment with lenalidomide

The pCODR systematic review included three studies: two open label randomized controlled trials (RCT), [FIRST (n=1623), MM-015 (n=459)] and one double blind RCT, [E1A06 (n=306)]. The FIRST trial randomized patients 1:1:1 to melphalan + prednisone + thalidomide (MPT) or LEN in combination with dexamethasone (Ld), either continuously until progression (con-Ld) or for 18 cycles of 4 weeks (Ld18). The MM-015 trial randomized patients 1:1:1 to a melphalan + prednisone + LEN (MPL) for induction followed by maintenance with LEN (MPL-L) or to MPL or melphalan + prednisone (MP) for induction without maintenance therapy. The E1A06 trial randomized patients 1:1 to receive induction with MPT followed by maintenance with thalidomide (MPT-T) or to induction with MPL followed by maintenance with LEN (MPL-L).

Patient populations: well balanced between three studies

Baseline characteristics were well balanced between groups across the three trials. The median age of patients ranged from 71 to 76 years across the three trials. The majority of patients in the FIRST and E1A06 trials had and Eastern Cooperative Oncology Group performance status (ECOG PS) of 0 (~30%), 1(~50%) or 2 (~20%). In the MM-015 trial, the median Karnofsky performance status scale (KPSS) ranged from 60 to 100, which pERC noted to be comparable to an ECOG PS of 0-2, as in the other two studies.

Key efficacy results: meaningful improvement in PFS for continuous lenalidomide

Key efficacy outcomes deliberated on by pERC included progression free survival which was the primary outcome in the FIRST trial. Median PFS was 25.5 vs. 20.7 vs. 21.2 months in the con-Ld, Ld18 and MPT arms, respectively. The improvements in PFS were statistically significant when con- Ld was compared to MPT treatment (HR 0.72, 95% CI 0.61 to 0.85, $P < 0.001$) and con-Ld was compared to Ld18 treatment (HR 0.70, 95% CI 0.60 to 0.82, $P < 0.001$). However, statistical significance was not reached between the MPT and Ld18 arms. pERC discussed the results of this study and concluded that there was a statistically significant and clinically meaningful benefit with con-Ld and that this benefit was conferred by the continuous use of lenalidomide as opposed to a fixed duration of treatment. The other two studies included in the pCODR systematic review also supported pERC's conclusion on the benefit of continuous treatment with lenalidomide (con-Ld).

pERC discussed results for overall survival (OS) in the FIRST study, a secondary outcome, and noted that a trend in improvement for OS was observed. While there was a statistically significant reduction in the risk of death between the con-Ld and MPT arms (HR 0.78, 95% CI 0.64 to 0.96, $p = 0.02$), pERC noted that the difference did not cross the pre-specified superiority boundary, which means that an OS advantage with con-Ld compared to MPT could not be confirmed.

Quality of life: improvement from baseline with con-Ld but difference between treatments not statistically significant

In the FIRST trial, quality of life was statistically and clinically significantly improved from baseline but not between both treatment groups at 18 months for EQ-5D index score and pain (QLQ-C30). Of note, compliance rates for HR-QoL questionnaires were higher for the con-Ld group than the MPT group at 12

months (91 vs. 81%; P ≤ 0.002) and at 18 months (89 vs. 67%; P ≤ 0.002). In MM-015, the MPL-L group achieved statistically and clinically significant improvement from baseline for disease symptoms, global health status, physical functioning, fatigue, and pain at 64 weeks. The MP group also achieved a statistically and clinically important change from baseline in pain. For the E1A06 study, the change from baseline in FACT-Ntx TOI score at 12 months favored MPL-L over MPT-T. All three studies demonstrated at least an improvement from baseline in favour of continuous lenalidomide treatment, although the difference between groups was not statistically significant (FIRST, E1A06) or was not reported (MM-015). pERC acknowledged that based on patient advocacy group input, quality of life was an important outcome to patients and that improvements in quality of life with con-Ld, or at least improvements from baseline, aligned with patient values.

Safety: manageable toxicity profile but secondary malignancy needs long term vigilance

pERC discussed the toxicity profile of con-Ld compared with MPT and noted that the side effect profile of con-Ld was generally manageable. In the FIRST trial, the overall occurrence of grade 3-4 AEs was similar between groups. AEs leading to dose interruptions and AEs leading to withdrawal were lower in the con-Ld arm compared to the Ld18 and MPT arms. Treatment with con-Ld was also associated with fewer hematological AEs, especially neutropenia (28 vs. 45 %), and fewer peripheral sensory neuropathies (1 vs. 9 %), but con-Ld was also associated with an increase of infections (29 vs. 17 %). pERC noted that there was no increase in second primary malignancies with continuous lenalidomide-containing regimens in these trials. However, as other trials have demonstrated second primary malignancies with the use of lenalidomide, pERC agreed with the Clinical Guidance Panel's conclusion that long term data are required to understand the true risk and incidence of second primary malignancies with continuous use lenalidomide. Overall, pERC noted that the toxicity profile of lenalidomide is different from MPT and MPB, which are both associated with cumulative toxicities when used as a continuous treatment. pERC agreed that the toxicity profile of lenalidomide is different from available standard treatments and provides a treatment option for patients.

Comparator: studies compared to MPT while Canadian context suggests MPB

The pCODR review also provided contextual information on a manufacturer-submitted network meta-analysis and a poster presentation of a network meta-analysis comparing con-Ld with other first-line treatments for patients with newly diagnosed multiple myeloma who are not candidates for stem cell transplantation. In considering the results of the submitter's NMA, pERC agreed with the CGP and concluded that limitations in the analysis created substantial uncertainty in the conclusions drawn from the results. While pERC noted that a randomized controlled trial is necessary to determine the true comparative efficacy between the two treatment regimens, clinical input indicated that a comparative study is not likely expected between con-Ld and MPB as future trials are focusing on combination regimens using lenalidomide as a backbone. pERC considered the body of evidence available in determining what the comparative efficacy between con-Ld and MPB may be. pERC discussed the clinical opinion of the CGP and pERC members which indicated that continuous treatment is the preferable treatment approach for patients; however, cumulative toxicities that develop with currently available treatments (MPT and/or MPB) have limited the duration of therapy that is tolerable by most patients. The toxicity profile of lenalidomide, which is different from currently available treatment options, allows for continuous treatment. The results of the FIRST trial also provide support for the use of a continuous therapy approach as opposed to a fixed treatment duration. This was demonstrated by the results of treatment with con-Ld compared to both a fixed duration of treatment with lenalidomide (Ld18) and MPT. Various opinions were expressed during deliberations and each of the above factors were valued differently by pERC members. Taken together and consistent with the conclusion on net clinical benefit of con-Ld compared with MPT, the majority of the Committee members agreed that the body of evidence from the available studies suggests that there may be a net clinical benefit of con-Ld compared to MPB in this setting, although the magnitude of this benefit is uncertain.

Need: more effective and tolerable options

Myeloma is incurable in the vast majority of cases. It is expected that approximately 2,500 new cases will be diagnosed annually in Canada. Autologous stem cell transplant (ASCT) is frequently performed as part of front line myeloma therapy. For patients who are ineligible for ASCT, treatment options generally include MPB, the Canadian standard of care, and MPT in a limited number of provinces. pERC noted that Canadian clinicians do not have a clear definition of ineligibility for ASCTs. Typically, the distinction is made individually for each patient by the treating hematologist or oncologist and may be due to advanced age, comorbidities and/or impaired functional status. Median survival for patients who are ineligible for

high dose chemotherapy and ASCT is 4-5 years. pERC noted that for patients with newly diagnosed multiple myeloma and who are ineligible for ASCT, there is a need for more effective and tolerable treatment options.

PATIENT-BASED VALUES

Values of patients with newly diagnosed multiple myeloma: better disease management, effective and accessible treatment options

pERC reviewed input from one patient advocacy group and noted the large number of patients who had completed their patient survey. Symptoms that patients considered important to control included infections, kidney problems, pain, loss of mobility, neuropathy, shortness of breath and fatigue. pERC also noted that patients valued a treatment that is effective, delayed disease progression and managed their disease symptoms. Patients also valued having a choice in therapy based on known side effects of the drug as well as having a therapy that is easily accessible. pERC concluded that the results of studies included in the pCODR systematic review supported the patient value of having more treatment options as well as enhancing accessibility of treatment, as con-Ld is an oral therapy that will not require patients to travel for treatment.

Patient values on treatment: effective and tolerable treatment option

pERC noted that patients desire a treatment that provides improvements in QoL and improvements in progression free survival. Some patients also indicated that they were willing to tolerate con-Ld side effects for an effective treatment option. Of the 33 patients who had experience with con-Ld, most indicated that it was effective in achieving disease remission. The most common side effects patients reported with con-Ld were skin rash, fatigue, constipation, neutropenia and diarrhea. Overall, patients indicated that lenalidomide improved their QoL and that con-Ld had been positive in terms of their long-term health and well-being. pERC considered that although lenalidomide has important toxicities, they are mostly manageable and reported to be tolerable by patients.

ECONOMIC EVALUATION

Economic model submitted: cost-effectiveness and cost-utility analysis

The pCODR Economic Guidance Panel assessed a cost-effectiveness and cost-utility analysis comparing con-Ld to MPB for patients with newly diagnosed multiple myeloma not eligible for stem cell therapy (SCT). A secondary analysis comparing con-Ld to MPT was also provided. The pCODR Economic Guidance Panel, did not consider the secondary analysis further as the most relevant treatment option in the Canadian setting was MPB. pERC recognized that MPT is available in a some jurisdictions but noted that access is limited. Overall, pERC agreed with the EGP and CGP that MPB is the most relevant treatment option in the Canadian setting.

Basis of the economic model: clinical inputs based on a network meta-analysis

Costs considered in the analysis included drug acquisition costs, drug administration costs, adverse event management costs, and other health care costs (i.e., lab test/monitoring).

The clinical effects considered in the analysis were based on survival estimates from the FIRST trial and the submitter's network meta-analysis and extrapolated utility values from several trials.

Drug costs: generic bortezomib available

At the list price, lenalidomide costs $340.00, $361.00, $382.00, $403.00, and $424.00 per 5, 10, 15, 20 and 25mg capsule, respectively. At the recommended dose of 25mg orally on days 1-21 per 28 day cycle, lenalidomide costs $318.00 per day and $8,904.00 per 28 day cycle.

At the list price, bortezomib (Velcade) costs $1,869.89 per 3.5mg vial. Based upon guidance from the pCODR Provincial Advisory Group (PAG), generic bortezomib is expected to cost $1,402.42 per 3.5mg vial. pERC noted that the Economic Guidance Panel (EGP) and the submitted estimates are based on this expected price for generic bortezomib. At the recommended standard dose for cycles 1-4 (1.3mg/m2 Days 1, 4, 8, 11, 22, 25, 29, 32 every 6 weeks) bortezomib costs $200.29 per day and $5,608.08 per 28 day

cycle. At the recommended dose for cycles 5-9 (1.3 mg/m² Days 1, 8, 22, 29 every 6 weeks) bortezomib costs $100.17 per day and $2,804.84 per 28 day cycle.

pERC discussed the cost of lenalidomide and noted that jurisdictions will need to consider the budgetary impact of making this brand name drug available, given that bortezomib, the relevant comparator, is now available as a generic product at a substantially reduced price. pERC agreed that a substantial reduction in the cost of lenalidomide is needed to offset the cost difference and uncertainty in the clinical effect estimates between con-Ld and MPB.

Cost-effectiveness estimates: wide range of estimates

pERC deliberated upon the cost-effectiveness of con-Ld compared with MPB based on the submitted economic evaluation. pERC also considered the EGP's reanalysis estimates which provided a more conservative analysis by making all efficacy and safety inputs equal between con-Ld and MPB. To account for the uncertainty of the magnitude of benefit, the EGP explored a number of factors. Based on the EGP's results, the most important factor affecting the ICER was the estimate of survival benefit, which was based on the NMA. The EGP also set estimates for health state utility gains and post progression survival benefit in the con-Ld arm at 0. In this conservative scenario, con-Ld cost more than MPB but with no incremental benefit. Additionally, the EGP also explored the impact of a shortened time horizon, to align with a more plausible clinical course of disease (10-20 years) as opposed to the submitted estimates which used a life time horizon of 38 years. In discussing the EGP's results, pERC acknowledged that the available evidence suggests there may be a net clinical benefit with con-Ld compared to MPB, but in the absence of comparative data, the magnitude of this benefit is uncertain. They therefore, concluded that the true cost-effectiveness estimate likely lies somewhere between the EGP's re-analysis results and the submitted estimates. pERC also concluded that the high cost of con-Ld in combination with uncertainty in the magnitude of clinical benefit give rise to a wide range of ICER`s most of which pERC considered not to be cost-effective.

ADOPTION FEASIBILITY

Considerations for implementation and budget impact: high drug cost, duration of treatment, budget impact

pERC discussed input from pCODR's Provincial Advisory Group regarding the feasibility of implementing a funding recommendation for lenalidomide. pERC noted several barriers to implementation related to the cost of lenalidomide. pERC discussed that bortezomib is now available as a generic product at a substantially lower price. Based on this cost difference, pERC noted that jurisdictions need to consider the potential budgetary impact of funding lenalidomide in place of a generic product. Patients are also treated with lenalidomide until disease progression or unacceptable toxicity. Consequently, an unknown duration of therapy creates additional uncertainty in the cost-effectiveness estimates. As an oral therapy, lenalidomide provides greater accessibility to patients compared to a partial intravenous regimen with MPB. Overall, pERC concluded that a substantial reduction in drug price would be required to improve the cost-effectiveness of lenalidomide and offset the considerable uncertainty in the incremental effect. pERC also acknowledged that funding for oral therapies in some jurisdictions requires applications to pharmacare programs involving co-payments and deductibles which may in turn cause a financial burden on patients and their families who do not have private insurance to cover the out-of-pocket cost of treatment.

pERC noted that lenalidomide is only available through a controlled distribution program, as required by Health Canada. Therefore, expanding lenalidomide access to the first line with maintenance setting requires greater pharmacy resources and patient access may be limited in settings that do not have these additional resources. pERC also noted that while an increased risk of second primary malignancies was not reported in the current studies, they have been observed in other studies and, therefore, long term data is needed to determine whether the risk of second primary malignancies and other serious toxicities with lenalidomide would require additional monitoring and health care resources.

DRUG AND CONDITION INFORMATION

Drug Information	• Immunomodulatory agent • 5, 10, 15, 20 and 25mg capsules • 25 mg per day (on days 1 to 21 of each cycle) in combination with dexamethasone (40 mg on days 1, 8, 15 and 22) administered on 28-day cycles. Treatment until progression
Cancer Treated	• Newly diagnosed multiple myeloma
Burden of Illness	• 2500 new cases will be diagnosed annually in Canada • Median survival of 4-5 years
Current Standard Treatment	• Bortezomib, melphalan and prednisone (MPB) • Thalidomide, melphalan and prednisone (MPT) available in some jurisdictions with limited accessibility
Limitations of Current Therapy	• Fixed duration of treatment • Need for more effective and tolerable therapies

ABOUT THIS RECOMMENDATION

The pCODR Expert Review Committee (pERC)

Recommendations are made by the pCODR Expert Review Committee following the pERC Deliberative Framework. pERC members and their roles are as follows:

Dr. Anthony Fields, Oncologist (Chair)
Dr. Maureen Trudeau, Oncologist (Vice-Chair)
Dr. Scott Berry, Oncologist
Bryson Brown, Patient Member
Dr. Matthew Cheung, Oncologist
Mario de Lemos, Pharmacist
Dr. Sunil Desai, Oncologist
Mike Doyle, Economist
Dr. Bill Evans, Oncologist
Dr. Allan Grill, Family Physician
Dr. Paul Hoskins, Oncologist
Danica Wasney, Pharmacist
Carole McMahon, Patient Member
Jo Nanson, Patient Member Alternate
Dr. Tallal Younis, Oncologist
Dr. Kelvin Chan, Oncologist

All members participated in deliberations and voting on the initial recommendation except:

- Bill Evans and Allan Grill who were not present for the meeting
- Matthew Cheung who was excluded from voting due to a conflict of interest
- Jo Nanson who did not vote due to her role as a patient member alternate

Avoidance of conflicts of interest

All members of the pCODR Expert Review Committee must comply with the *pCODR Conflict of Interest Guidelines*; individual conflict of interest statements for each member are posted on the pCODR website and pERC members have an obligation to disclose conflicts on an ongoing basis. For the review of lenalidomide for multiple myeloma, through their declarations, four members had a real, potential or perceived conflict and based on application of the *pCODR Conflict of Interest Guidelines*, one of these members was excluded from voting.

Information sources used

The pCODR Expert Review Committee is provided with a *pCODR Clinical Guidance Report* and a *pCODR Economic Guidance Report*, which include a summary of patient advocacy group and Provincial Advisory Group input, as well as original patient advocacy group input submissions to inform their deliberations. pCODR guidance reports are developed following the pCODR review process and are posted on the pCODR website. Please refer to the pCODR guidance reports for more detail on their content.

Consulting publicly disclosed information

pCODR considers it essential that pERC recommendations be based on information that may be publicly disclosed. All information provided to the pCODR Expert Review Committee for its deliberations was handled in accordance with the *pCODR Disclosure of Information Guidelines*.

Use of this recommendation

This recommendation from the pCODR Expert Review Committee (pERC) is not intended as a substitute for professional advice, but rather to help Canadian health systems leaders and policymakers make well-informed decisions and improve the quality of health care services. While patients and others may use this Recommendation, it is for informational and educational purposes only, and should not be used as a substitute for the application of clinical judgment respecting the care of a particular patient, for professional judgment in any decision-making process, or for professional medical advice.

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