

# ADHERENCE TO IMMUNOMODULATORY DRUGS IN PATIENTS WITH MULTIPLE MYELOMA.

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## ① BACKGROUND

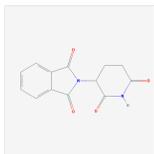


Figure 1. Thalidomide  
Source: PubChem <https://pubchem.ncbi.nlm.nih.gov>

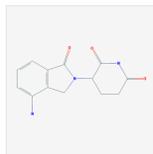


Figure 2. Lenalidomide  
Source: PubChem <https://pubchem.ncbi.nlm.nih.gov>

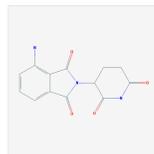


Figure 3. Pomalidomide  
Source: PubChem <https://pubchem.ncbi.nlm.nih.gov>

Thalidomide, lenalidomide and pomalidomide belong to the immunomodulatory drug family (**IMiDs**). Data on IMiDs adherence are lacking.

## ② PURPOSE

→ to evaluate the **adherence** to IMiDs in patients with **multiple myeloma**.

## ③ MATERIAL and METHODS

All patients managed in our teaching hospital for a **multiple myeloma** who had at least **two successive dispensations** of **IMiDs** were included in a prospective study between 2016, March 1 and 2016, May 15.

We used a cancer-specific **questionnaire** to measure patient adherence to IMiDs<sup>1</sup> (10 questions; 10 points).

Table I. Questionnaire to measure patient adherence [Daouphars *et al.*]

1. This morning did you forget to take your medicine?
2. Since the last visit have you run out of medicine?
3. Do you ever take your medicine too late in comparison with usual time?
4. Sometimes if you feel worse when you take your medicine, do you stop taking it?
5. Do you think that you take too many medications?
6. Do you ever not take your medicine because you forgot to do so?
7. Do you know the name of your medications?
8. Do you ever miss doses of your medicine when you feel sick?
9. Does a change in your daily routine modify the way you take your medicine?
10. Do you sometimes skip doses of your medicine when you feel better?

A non-adherence was defined for a score below 8 points.

The **medication possession ratio (MPR)** was also calculated to evaluate IMiDs adherence.

$$\text{MPR} = \frac{\text{number of days of medication supplied within the refill interval}}{\text{number of days in refill interval}}$$

The threshold of 90% was used to define two patient categories: MPR < 90%, non-adherent patients; MPR ≥ 90%: adherent patients<sup>1</sup>.

Clinical and dispensation data were obtained from medical and pharmaceutical softwares of our hospital.

## ④ RESULTS

→ **63** adult patients were included

The mean patient age was 68.2±10.4 years; 67% were men. The median time since diagnosis was 2.8 years [range 0.2-17.1].

Patients received :

- lenalidomide (54%)
- pomalidomide (25%)
- thalidomide (21%)

More than half of the patients used tools to help them with their medication.

The mean questionnaire score was **8.2 ± 1.2** [range 4-10].

The mean time to fulfill the questionnaire was 9.2 ± 4.7 minutes.

Question	« Yes » n	%
1. This morning did you forget to take your medicine?	1	1,59%
2. Since the last visit have you run out of medicine?	2	3,17%
3. Do you ever take your medicine too late in comparison with usual time?	26	41,27%
4. Sometimes if you feel worse when you take your medicine, do you stop taking it?	2	3,17%
5. Do you think that you take too many medications?	35	55,56%
6. Do you ever not take your medicine because you forgot to do so?	11	17,46%
7. Do you know the name of your medications?	36	57,14%
8. Do you ever miss doses of your medicine when you feel sick?	5	7,94%
9. Does a change in your daily routine modify the way you take your medicine?	4	6,35%
10. Do you sometimes skip doses of your medicine when you feel better?	0	0,00%

41% of the patients had ever taken their medicine too late in comparison with usual time.

57% of the patients thought they took too many medicines.

43% of the patients did not know the name of their medicines.

We observed a mean MPR of **0.95 ± 0.10** [range 0.67-1.20].

→ A total of **76%** of patients were considered as **adherent** using the questionnaire and **72%** using the MPR.

## ⑤ CONCLUSION

Adherence to IMiDs is not optimal in our population. The use of adherence questionnaire and/or MPR may help the pharmacist to detect non-adherent patients. In these patients, pharmaceutical interventions may be of major interest.

## ⑥ REFERENCES and/or ACKNOWLEDGEMENTS

1. Daouphars M, Ouvry M, Lenain P, *et al.* Preliminary validation of self-assessment tool to measure imatinib adherence in patients with chronic myeloid leukemia. *Pharmacotherapy*. Feb 2013;33(2):152-156.