

CONTEXT

Daratumumab subcutaneously (1800mg/15mL) is administered in a Day Care Unit (HDJ) for the treatment of multiple myeloma. **A 97% decrease in injection time** is observed thanks to switching from intravenous (IV) to SC administration **which lasts about 5 minutes**.

However, since the transition to the SC pathway, nurses describe **MusculoSkeletal Disorders (MSDs)** especially on the wrists.

OBJECTIVES

Evaluation of the use of a syringe pump (SP) for SC injection.



MATERIALS AND METHODS



Development of a **comparative questionnaire** between manual injection and syringe pump injection for nurses to rate MSDs risks.

The rating is on 3 points (3/3 corresponds to very good).

Nom :		Injection manuelle				Injection par pousse seringue			
Date :		0	1	2	3	0	1	2	3
Répétitivité des gestes									
Facilité d'installation/de branchement									
Facilité d'injection	Répétitivité des gestes								
	Effort manuel								
	Posture contraignante								
Surpression cutanée									
Confort patient									
0: Mauvais / 1: Moyen / 2: Bon / 3: Très bon									
Commentaires :									



Evaluation of the **economic impact** of using a syringe pump by comparing the costs of the necessary MDS.

RESULTS



- 6 nurses compared the two methods and are satisfied with the use of syringe pumps because of **the comfort for the patient and for themselves** (3/3).
- No difference exists in terms of ease of connection of the syringe and repetitiveness of gestures.
- An effort and a constraining posture** of nurses are observed with manual injection (0/3) while **syringe pump requires none** (3/3).
- A strong painful cutaneous overpressure** is notified with manual injection (1/3) while **it's lighter with the syringe pump** (2/3).

- The DMS cost of the SC injection** via a syringe pump is **negligible** (1.73 € **VS** 1.05 € manually, or. an additional cost of €0.72 per syringe). This requires an extender, a peripheral short venous catheter and a catheter dressing.



- Regarding the extender,
 - The nurse want a **long extender for the comfort of laying**.
 - The pharmacist recommends a **short extender to minimize the dead volume**.
 - The compromise is a **25cm extender** with a dead volume of 0.2mL, or 1.3% of the total volume to be injected.
- The extender is retained following an evaluation phase and a learning time for the installation of the syringe pump.

CONCLUSION

- A better fluidity in the organization of HDJ has been observed since the development of the SC form : this **considerably reduces the time of presence of patients**.
- A syringe pump is a real solution to **limit pain in nurse**.



Project to extend the use of syringe pump for other SC-injected antibodies to be administered in more than 5 minutes.