Preparation of 5 FU’s infusors: from anarchy to dose banding

Stéphanie Martignoni, Dr. Grégory Podilsky, Dr. Béatrice Gay, Prof. André Pannatier
Facts & Aims of the study

**Facts**

- **Stability**: 30 days

**Aims**

- A better *organisation* at the pharmacy unit
- To improve *deadlines* for infusor’s delivery
- A decrease of infusor *returns*

**RATIONALISATION OF PRODUCTION WITH THE DOSE BANDING?**

1. Production of infusors 48h

   ![Graph showing production of infusors from 2007 to 2011](chart)

   - Quantity of infusors: 418, 713, 666, 781, 867

2. Coordinated Center of Oncology ambulatory

   - Inf: 6.3%

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Method

1. **Feasability study**
   - 1.1 **Retrospective analysis** of 2010’s production
   - 1.2 **Presentation** of the concept to the medical staff
   - 1.3 **Selection** of standardised dosage

2. **Implementation** of dose banding
Retrospective analysis

- **837 infusors**
  - 91 dosages
  - 132 patients

- **36 infusors**
  - (5.5 days)
  - 23 dosages
  - 19 patients

- **781 infusors**
  - (48 hours)
  - 52 dosages
  - 109 patients

- **20 infusors**
  - (7 days)
  - 7 dosages
  - 4 patients
# Retrospective analysis

![Graph showing production 2010 of 5-FU infusors 48h](image)

**Production 2010 of 5-FU infusors 48h**

<table>
<thead>
<tr>
<th>Dosage [mg]</th>
<th>Quantity of infusors</th>
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</thead>
<tbody>
<tr>
<td>2600</td>
<td>6</td>
</tr>
<tr>
<td>2700</td>
<td>3</td>
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<td>2800</td>
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<td>4900</td>
<td>1</td>
</tr>
</tbody>
</table>

Total dosages: **52**

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Retrospective analysis  

Dose banding with an interval of +/- 10%

Quantity of infusors

3250 | 402 | 4800

103 | 402 | 268

Standardised dosage [mg]

n=773 98%  

N=781
Retrospective analysis

Dose banding with an interval of +/- 5%

N=781

Dose banding with an interval of +/- 5%

Survey:

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Feasability study of standardisation of doses

- Low cost
- Stability $^{1,2}$
- Frequency of use (800/ year)
- Repetitive dosage
- Agreement of clinicians

A PRIORI

RETROSPECTIVE ANALYSIS

A POSTERIORI

1 Stabilis 4.0
2 Manufacturer Data
Implementation of dose banding

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5-FU INFUSOR’S PROCESS

CPOE: Rounding choice

Existing process

Nominal Dispensing

PRESCRIPTION

PRODUCTION

DISPENSING

4 standards protocols

In process gravimetric control

Tracability

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Preliminary Results

Results will be analysed 6 months later (Beginning of 2013)

After 2 months...

Dose banding production

Over 135 infusors prescribed ...

<table>
<thead>
<tr>
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<th>Quantity of infusors</th>
</tr>
</thead>
<tbody>
<tr>
<td>3600</td>
<td>37</td>
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<td>4000</td>
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<tr>
<td>4400</td>
<td>33</td>
</tr>
<tr>
<td>4800</td>
<td>30</td>
</tr>
</tbody>
</table>

- 109; 81%
- 26; 19%

Dose banding
Individual dosage

81%
Conclusion & Perspectives

Dose banding: More than a myth, a reality...

Computerised prescription (CPOE)

↓
Pharmaceutical Validation

↓
Production

↓
Labelling

↓
Storage

↓
Transport + Administration

Schedule of manufacturing

Production of standardised infusors
Acknowledgments

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Thank you for your attention!