Illustrating a paper

When, where, how
Illustrating a paper

A picture = A thousand words
Illustrations

• Types
  – Graphs
  – Photographs
  – Flow charts

• Location in relation to IMRAD structure
  – Results
  – Methods: technique, study design
Illustrations

• Purpose-specific

• Graphs
  – Line: usually event in relation to time
  – Bar: comparisons
  – Pie: parts of a whole
  – Histogram: frequency distribution
  – Scatter: associations between variables
Illustrations

• Photographs, pictures
  – Technique
  – Before and after
  – Show an event

• Flow charts
  – Process, sequence, systems
  – Algorithms
Illustrations

• What do I want to say?
• Is there a better method?
• Type of figure?

• Less better than more
• Only if necessary
Illustrations

• Line
• Half-tone (black and white)
• Colour

Differences in processing and cost
Table or figure

• Prefer tables

• Use figures only for illustrative

• Bar, histogram, pie: ? table

Difference in written and oral communication
Example: *Figure*

**Fig. 2**

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Indian</th>
<th>Foreign</th>
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</thead>
<tbody>
<tr>
<td>Content</td>
<td>24</td>
<td>7</td>
</tr>
<tr>
<td>Layout</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>Printing</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>Appearance</td>
<td>21</td>
<td>6</td>
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<tr>
<td>Style</td>
<td>23</td>
<td>7</td>
</tr>
<tr>
<td>Overall standard</td>
<td>5</td>
<td>5</td>
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</table>
Table: Judgements of 75 journals by Indian and foreign reviewers

<table>
<thead>
<tr>
<th>Criterion</th>
<th>% (no.) reaching international standard</th>
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<tbody>
<tr>
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<td>Foreign reviewers</td>
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<tr>
<td>Content</td>
<td>24 (18)</td>
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<td>Printing</td>
<td>16 (12)</td>
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<tr>
<td>Appearance</td>
<td>9 (7)</td>
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<td>Style</td>
<td>23 (17)</td>
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<tr>
<td>Overall standard</td>
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</table>
Study design

- **Intraperitoneal inoculation of** 1 X 10⁶ DLA cells (day 0)

- **Treatment (d 1,2,3)**

- **Observation**

**Days**

0 1 2 3 4 30

**Groups**

- **Group 1** Vehicle
- **Group 2** Total alkaloid fraction (5 mg/Kg/d)
- **Group 3** Total alkaloid fraction (10 mg/Kg/d)
- **Group 4** Total alkaloid fraction (20 mg/Kg/d)
- **Group 5** Methotrexate (3.4 mg/Kg/d) (Positive control)
Figure: *Guidelines*

- **2 axes**: 2 types of information
- **Curves**: not more than 5 lines, thick
- **Label axes**: quantity, units
- **Start axes at 0 (except log scale)**
- **Simple symbols** (●, □, ♦) *not* ☠, &
- **Crossing curves**: show break
Figures: *Guides*

- Good contrast
- Label
- Stain used
- Mask identity: *consent*
- Magnification and scale
- *No clips or staples*
- *Use colour, if absolutely essential*
Figure: Legend

- Write on separate sheet
- Not on back of figure
- Brief but complete
- Explain label
- Full form of abbreviations
Figure: *Back of*

- Write TOP and mark ↑
- Name of first author
- Brief title of article
- Figure number
- *Use soft pencil*
Figure 1: Effect of total alkaloid fraction of methanolic extract of unripe fruit of Solanum pseudocapsicum on mean survival time (MST) in DLA tumor bearing mice.
Fig 1. Effect of total alkaloid fraction of the methanolic extract on mean survival time.
Figure: *Inadequate*

- Poor contrast
- No labels
Figure: *Improved*

- Right atrium
- Narrowing
- Inferior vena cava
- Hepatic vein
Figure: Example
Figure: Example

OPERATED CA BREAST

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<td>4</td>
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<td>BILAT.</td>
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TOTAL 63
Figure: *Example*
Figure: Example
Summary

- Illustrations: adjuncts
- Convey a message
- Various types: use appropriately
- Ask: *Is it needed?*

- *Simple, consistent, clear, focused, visually effective*
Recommend

• Look at recent issue of journal
• Use a similar published figure as a template

• Read journal instructions
• Read Vancouver style (www.icmje.org)