Classification:

- **HO-HCFA**: Healthcare facility onset, healthcare facility associated CDI
- **CO-HCFA**: Community onset, healthcare facility associated CDI
  - within 48 hours of admission
  - within 4 weeks of discharge from a healthcare facility
- **Intermediate**: Discharge within past 4-12 weeks from a healthcare facility
- **CA-CIDI**: >12 weeks since discharge from the healthcare facility

NAPI/BI/027 strain

- Fluoroquinolone resistant strain
- Produce enterotoxins A and B
  - Mutation of tcdC gene
  - Increase in enterotoxin A by 16 fold
  - Increase in enterotoxin B by 23 fold
  - Production binary toxin (encoded by cdtB gene)
  - 2-3% of NAPI/BI/027 do not produce enterotoxin A (only B produced)

Risk Factors (Hazard Ratio):

- Advanced age (>64 y/o)
- Duration of hospitalization (1.1)
- Antimicrobial exposure
- Chemotherapy exposure (1.9)
- Previous CDI (4.5)
- Gastrointestinal surgery (2.6)
- Tube feeding (2.0)
- Stomach acid suppression therapy (2.5)
Diagnosis:

- Stool culture is the most sensitive and specific test but lacks clinical utility due to the turnaround time
- EIA for toxin A or toxin A & B:
  - Sensitivity 63-94%, specificity is 75-100%
  - Toxin A&B preferred as 1-2% of CDI does not contain toxin A
- Common Antigen GDH Detection:
  - Sensitivity of 85-95% and specificity of 89-99%
  - Downfall is that does not detect toxin A or B

- CDI and recurrent CDI are defined by:
  - The presence of symptoms (usually diarrhea)
    - ≥ 3 unformed stools within ≤ 24 hours
  - AND
    - stool test positive for C. difficile toxins
    - Or stool test positive for toxigenic C. difficile
    - Or colonoscopic/histopathologic findings revealing PMC
  - Usually also associated with a history of Abx use within the last 8 weeks

Presentation:

- Diarrhea (+mucus or occult blood)
  - Hematichizia are rare
- Fever (<50% of patients)
- Abdominal discomfort/cramping (<50% of patients)
- Arthritis (very rare), bacteremia (very rare)

Treatment:

<table>
<thead>
<tr>
<th>Clinical definition</th>
<th>Supportive clinical data</th>
<th>Recommended treatment</th>
<th>Strength of recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial episode, mild or moderate</td>
<td>Leukocytosis with a white blood cell count of 15,000 cells/µL or lower and a serum creatinine level less than 1.5 times the premorbid level</td>
<td>Metronidazole, 500 mg 3 times per day by mouth for 10–14 days</td>
<td>A-I</td>
</tr>
<tr>
<td>Initial episode, severe</td>
<td>Leukocytosis with a white blood cell count of 15,000 cells/µL or higher or a serum creatinine level greater than or equal to 1.5 times the premorbid level</td>
<td>Vancomycin, 125 mg 4 times per day by mouth for 10–14 days</td>
<td>B-I</td>
</tr>
<tr>
<td>Initial episode, severe, complicated</td>
<td>Hypotension or shock, ileus, megacolon</td>
<td>Vancomycin, 500 mg 4 times per day by mouth or by nasogastric tube, plus metronidazole, 500 mg every 8 hours intravenously. If complete ileus, consider adding rectal instillation of vancomycin</td>
<td>C-III</td>
</tr>
<tr>
<td>First recurrence</td>
<td>...</td>
<td>Same as for initial episode</td>
<td>A-II</td>
</tr>
<tr>
<td>Second recurrence</td>
<td>...</td>
<td>Vancomycin in a tapered and/or pulsed regimen</td>
<td>B-III</td>
</tr>
</tbody>
</table>

*The criteria proposed for defining severe or complicated CDI are based on expert opinion. These may need to be reviewed in the future upon publication of prospectively validated severity scores for patients with CDI.