**Stage Classification**

- Neonate with suspected or definite NEC
  - Clinical assessment
  - Cultures (Blood, urine), CBC, CRP
  - Abdominal X-rays
  - Other clinically directed evaluation
  - Review prior cultures and antibiotic use*

### Systemic Signs

- IA: Suspected
  - Temperature instability, apnea, bradycardia, lethargy

- IB: Suspected
  - Same as above

- IIA: Definite
  - Mildly ill

- IIB: Definite
  - Moderately ill

- IIIA: Advanced
  - Severely ill

- IIIB: Advanced
  - Severely ill

### Abdominal Signs

- IA: Suspected
  - Gastric retention, abdominal distention, emesis, heme-positive stool

- IB: Suspected
  - Grossly bloody stool

- IIA: Definite
  - Same as above plus absent bowel sounds +/- abdominal tenderness

- IIB: Definite
  - Same as above plus absent bowel sounds, definite tenderness +/- abdominal cellulitis or RLQ mass

- IIIA: Advanced
  - Same as IIB plus hypotension, severe apnea, combined respiratory and metabolic acidosis, DIC, neutropenia

- IIIB: Advanced
  - Same as IIIA

### Radiographic Signs

- IA: Suspected
  - Normal or intestinal dilation, mild ileus

- IB: Suspected
  - Same as above

- IIA: Definite
  - Intestinal dilation, ileus, pneumatosis intestinalis

- IIB: Definite
  - Same as IIIA + portal venous gas +/- ascites

- IIIA: Advanced
  - Same as IIIB + portal venous gas + definite ascites

- IIIB: Advanced
  - Same as IIIA + pnuemonoperitoneum

### Spontaneous Intestinal Perforation

- Duration of Antibiotic Therapy:
  - Monitor clinical signs (abdominal exam, blood in stool, hypotension), laboratory markers (WBC, acidosis, thrombocytopenia), radiographic findings (pneumatosis, dilated loops).
  - Minimum duration of 7 days for definite NEC and then reassess

- Antibiotic therapy including anaerobic coverage: **Ampicillin + Gentamicin + Metronidazole**

- Duration based on suspicion and clinical progression of infection

- **Ampicillin + Gentamicin**

- **Ampicillin + Gentamicin + Metronidazole**

- **Piperacillin / Tazobactam (Zosyn)** ± vancomycin

### Duration of Bowel Rest:

- NPO for duration of antibiotic therapy.
- Duration of bowel rest may be longer than duration of antibiotic therapy depending on clinical assessment of patient’s feeding readiness, as evaluated by neonatology and surgical team.

- If cultures from blood or other sterile site(s) are positive, therapy should be targeted to treat the isolated organism(s).

- If significant antibiotic exposure or history of multidrug-resistant organism consult ID and consider alternative antibiotic therapy

- If renal impairment or oliguria, consider alternative therapy

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