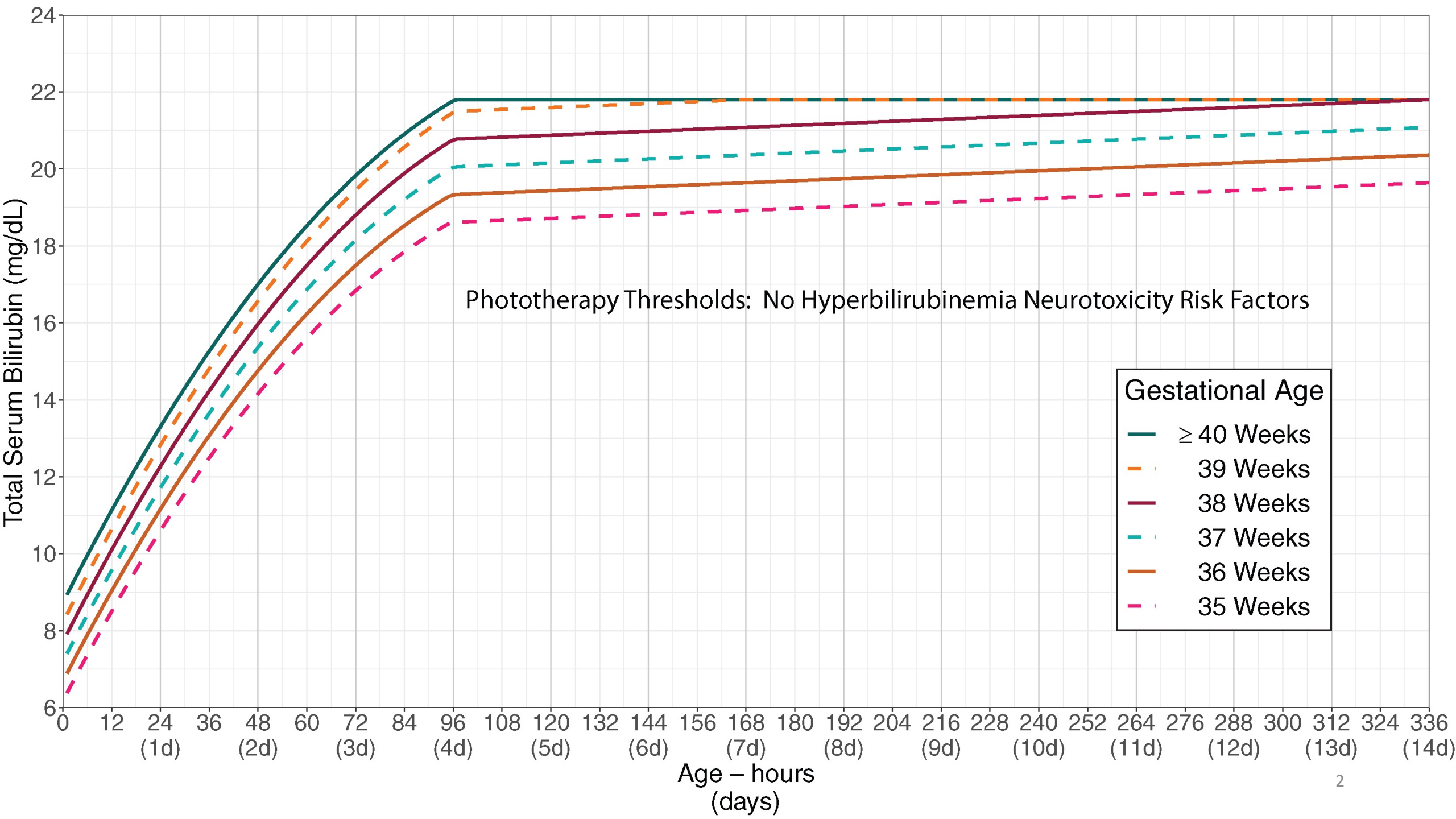
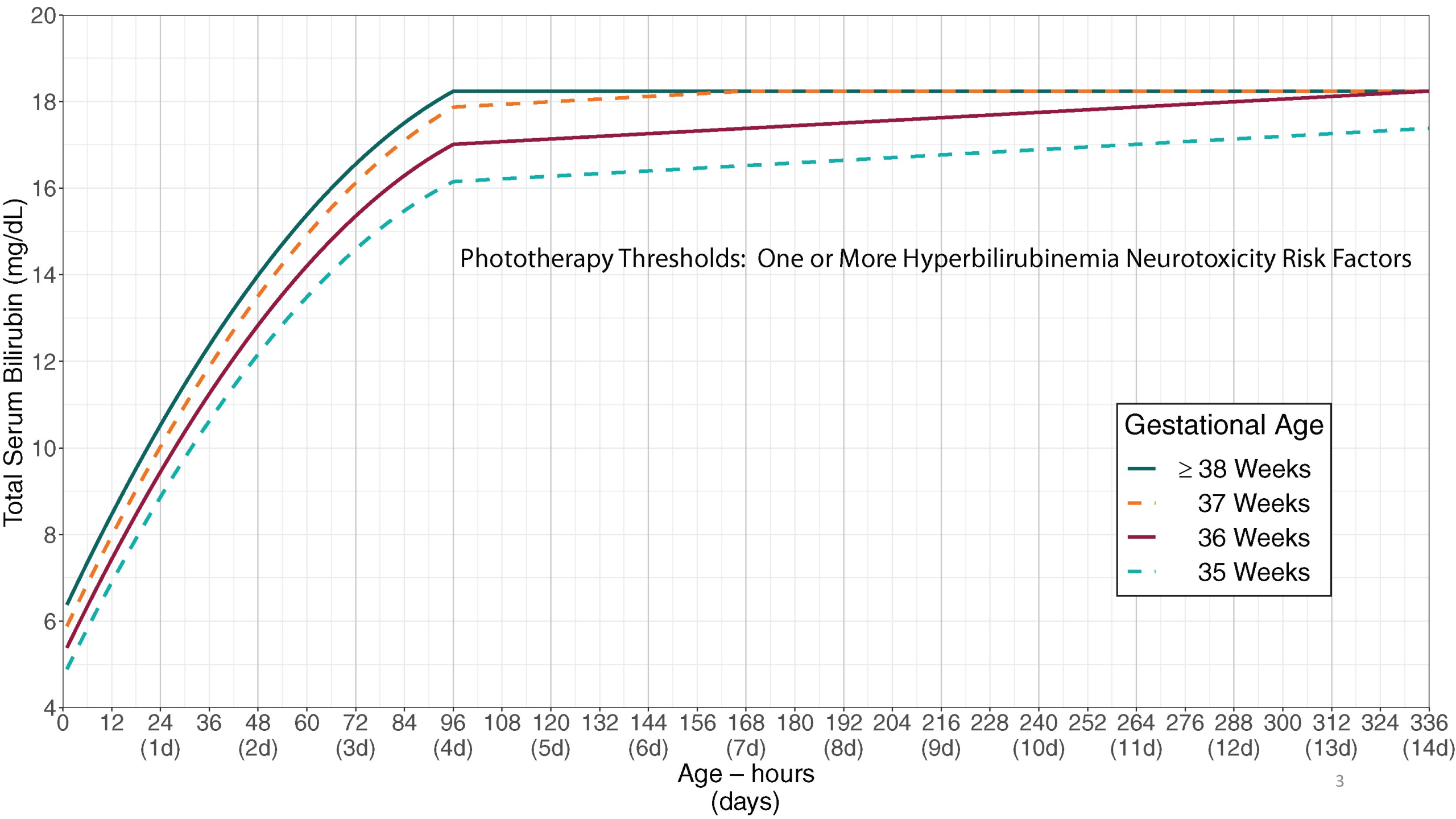
AAP Hyperbilirubinemia Guidelines 2022

- Check infant direct antiglobulin test (DAT) if maternal antibody screen positive or unknown, or rate of rise of bilirubin > 0.3 mg/dL/hr in first 24 hrs, > 0.2 mg/dL/hr therafter
- Visually assess for jaundice every 12 hrs after delivery until discharge
  - Measure TcB (transcutaneous) or TSB (serum) bilirubin at 24-48 hrs after birth or before discharge if that occurs earlier, or if appears jaundiced earlier
- If TcB is within 3 mg/dL of phototherapy threshold or $\geq$ 15 mg/dL, measure TSB
- Use slides 2 and 3 for phototherapy thresholds, slide 4 for risk factors, slides 6 and 7 for exchange transfusion thresholds
- If require admission, obtain CBC, total/direct bilirubin, type & screen (cross if require exchange transfusion), DAT. If near or at exchange transfusion threshold, send labs STAT and add albumin, chem panel, contact neonatologist


Phototherapy Thresholds: No Hyperbilirubinemia Neurotoxicity Risk Factors
Gestational Age
≥ 40 Weeks
39 Weeks
38 Weeks
37 Weeks
36 Weeks
35 Weeks
Total Serum Bilirubin (mg/dL)
24
22
20
18
16
14
12
10
8
6
0 12 24 36 48 60 72 84 96 108 120 132 144 156 168 180 192 204 216 228 240 252 264 276 288 300 312 324 336
(1d) (2d) (3d) (4d) (5d) (6d) (7d) (8d) (9d) (10d) (11d) (12d) (13d) (14d)
Age – hours
(days)


Phototherapy Thresholds: One or More Hyperbilirubinemia Neurotoxicity Risk Factors
Total Serum Bilirubin (mg/dL)
20
18
16
14
12
10
8
6
4
0
12
24
(1d)
36
48
(2d)
60
72
(3d)
84
96
(4d)
108
120
(5d)
132
144
(6d)
156
168
(7d)
180
192
(8d)
204
216
(9d)
228
240
(10d)
252
264
(11d)
276
288
(12d)
300
312
(13d)
324
336
(14d)
Age – hours
(days)
Gestational Age
≥ 38 Weeks
37 Weeks
36 Weeks
35 Weeks

Risk factors for significant hyperbilirubinemia

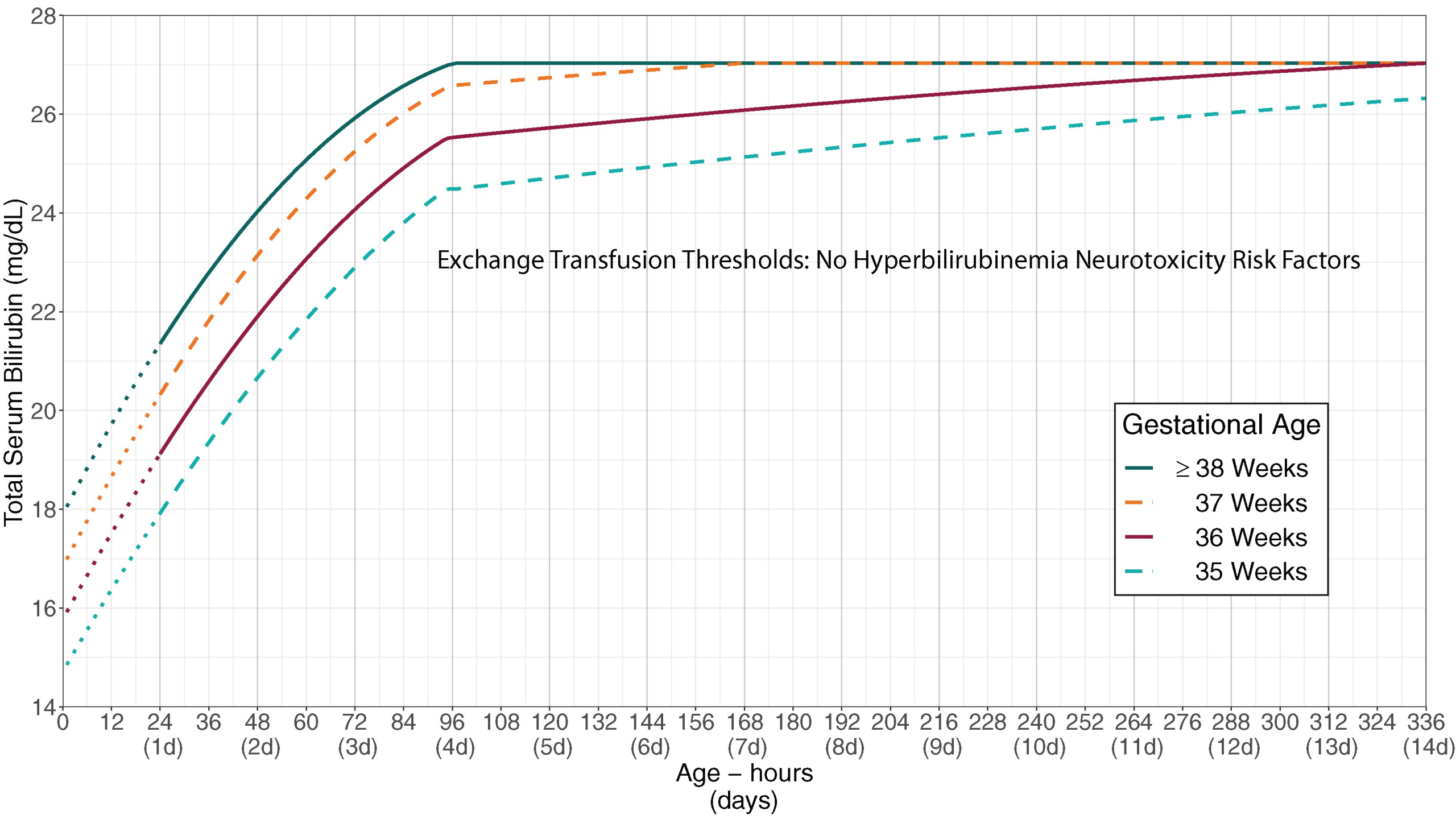
- Lower gestational age
- Jaundice in first 24 hrs after birth
- Pre-discharge TcB or TSB close to phototherapy threshold
- Hemolysis from any cause
  - Suspect with rate of rise > 0.3 mg/dL/hr in first 24 hr, > 0.2 mg/dL/hr thereafter
- Phototherapy before discharge
- Parent/sibling required phototherapy or exchange transfusion
- FH inherited RBC disorders, including G6PD
- Exclusive breastfeeding with suboptimal intake
- Scalp hematoma or significant bruising
- Down syndrome
- Macrosomic infant of diabetic mother

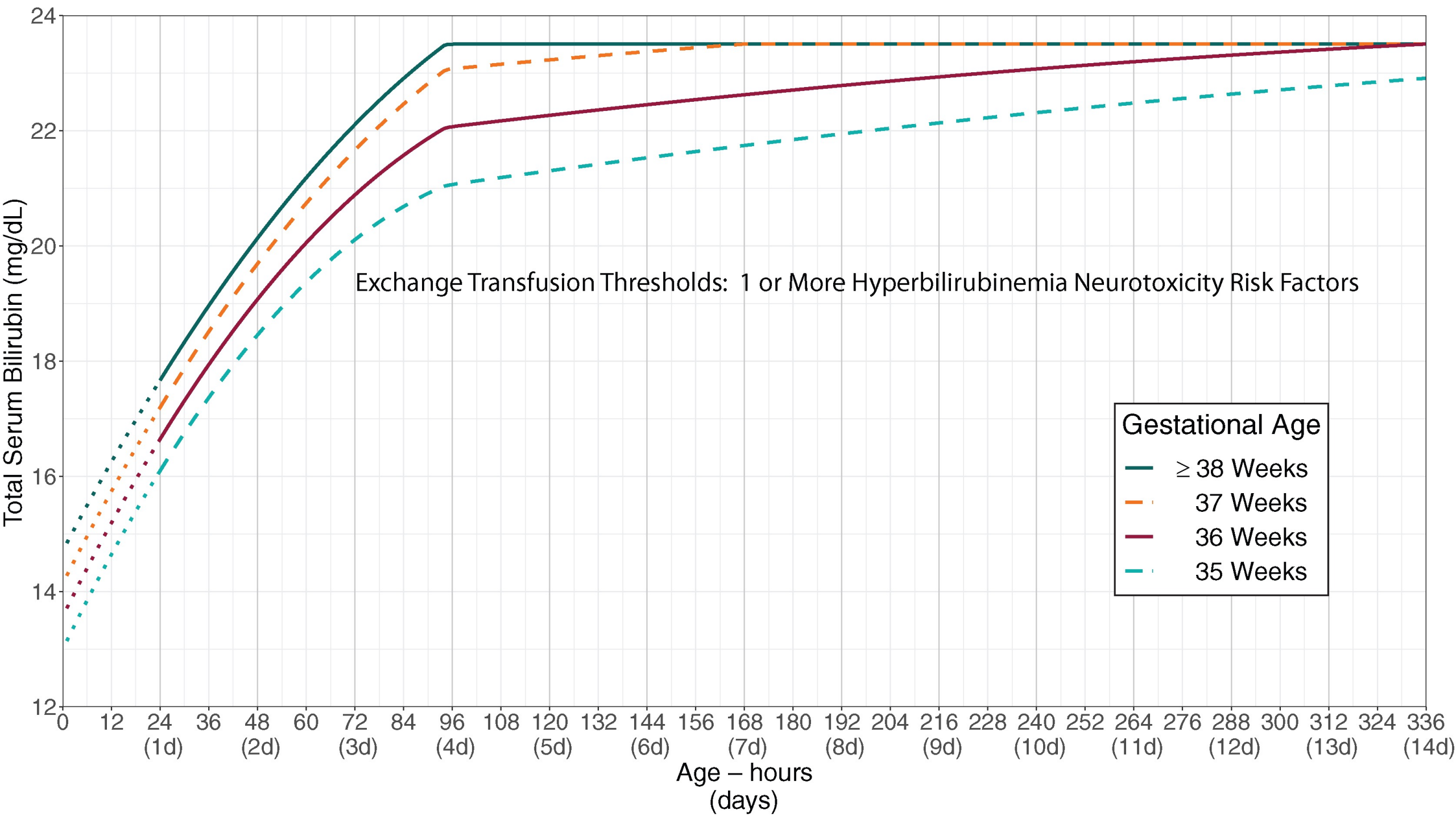
Risk factors for hyperbilirubinemia neurotoxicity

- Gestational age < 38 weeks and risk increases with each degree of prematurity
- Albumin < 3.0 g/dL
- Isoimmune hemolytic disease (+ direct antiglobulin test), G6PD deficiency, or other hemolytic conditions
- Sepsis
- Significant clinical instability in the previous 24 hours

Home LED-based phototherapy okay if:

- Gestational age ≥ 38 weeks
- ≥ 48 hours old
- Clinically well with adequate feeding
- No known hyperbilirubinemia neurotoxicity risk factors (see slide 4)
- No previous phototherapy
- TSB no > 1 mg/dL above the phototherapy threshold
- An LED-based phototherapy device will be available at home without delay
- TSB can be measured daily


Exchange Transfusion Thresholds: No Hyperbilirubinemia Neurotoxicity Risk Factors
Total Serum Bilirubin (mg/dL)
28
26
24
22
20
18
16
14
Gestational Age
≥ 38 Weeks
37 Weeks
36 Weeks
35 Weeks
0
12
24 (1d)
36
48 (2d)
60
72 (3d)
84
96 (4d)
108
120 (5d)
132
144 (6d)
156
168 (7d)
180
192 (8d)
204
216 (9d)
228
240 (10d)
252
264 (11d)
276
288 (12d)
300
312 (13d)
324
336 (14d)
Age – hours
(days)


Exchange Transfusion Thresholds: 1 or More Hyperbilirubinemia Neurotoxicity Risk Factors
Total Serum Bilirubin (mg/dL)
24
22
20
18
16
14
12
Gestational Age
≥ 38 Weeks
37 Weeks
36 Weeks
35 Weeks
0 12 24 (1d) 36 48 (2d) 60 72 (3d) 84 96 (4d) 108 120 (5d) 132 144 (6d) 156 168 (7d) 180 192 (8d) 204 216 (9d) 228 240 (10d) 252 264 (11d) 276 288 (12d) 300 312 (13d) 324 336 (14d)
Age – hours
(days)