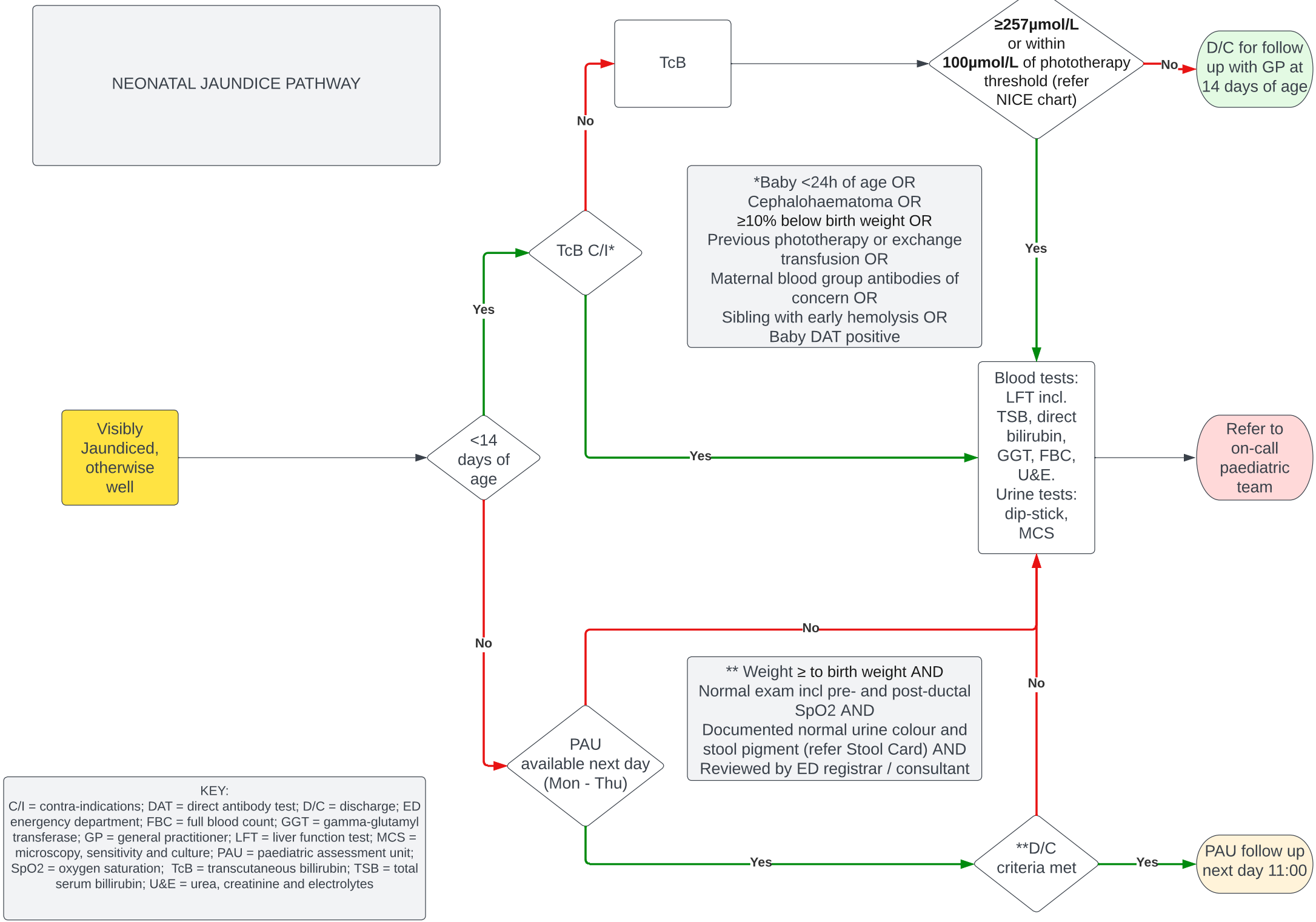
NEONATAL JAUNDICE PATHWAY
Visibly Jaundiced, otherwise well
<14 days of age
No
Yes
TcB C/I*
No
Yes
TcB
≥257µmol/L or within 100µmol/L of phototherapy threshold (refer NICE chart)
No
D/C for follow up with GP at 14 days of age
Yes
*Baby <24h of age OR
Cephalohaematoma OR
≥10% below birth weight OR
Previous phototherapy or exchange transfusion OR
Maternal blood group antibodies of concern OR
Sibling with early hemolysis OR
Baby DAT positive
Yes
Blood tests: LFT incl. TSB, direct bilirubin, GGT, FBC, U&E.
Urine tests: dip-stick, MCS
Refer to on-call paediatric team
No
PAU available next day (Mon - Thu)
No
** Weight ≥ to birth weight AND
Normal exam incl pre- and post-ductal SpO2 AND
Documented normal urine colour and stool pigment (refer Stool Card) AND
Reviewed by ED registrar / consultant
No
**D/C criteria met
Yes
PAU follow up next day 11:00
Yes
KEY:
C/I = contra-indications; DAT = direct antibody test; D/C = discharge; ED energency department; FBC = full blood count; GGT = gamma-glutamyl transferase; GP = general practitioner; LFT = liver function test; MCS = microscopy, sensitivity and culture; PAU = paediatric assessment unit; SpO2 = oxygen saturation; TcB = transcutaneous billirubin; TSB = total serum billirubin; U&E = urea, creatinine and electrolytes

Neonatal jaundice

- Jaundice occurs in approximately 60% of full term and 80% of pre-term babies within the first week of life.
- Physiological and breast milk jaundice are the most common causes.
- Kernicterus is a rare complication of neonatal unconjugated hyperbilirubinaemia that can lead to major long-term neurological sequelae.
- **ALL visibly jaundiced infants presenting to the emergency department should have their bilirubin levels tested.**
- The total serum bilirubin (TSB) level can be estimated based on measurements of the transcutaneous bilirubin (TcB).
- These devices measure the yellowness of reflected light transmitted from the skin and use an algorithm to predict the TSB level from the objective measurement of skin colour.

ALL patients fit for discharge from the ED needs to be reviewed by a registrar / consultant.

**Patients ≥14 days, meeting the above **D/C criteria set out in the pathway, can be sent to the PAU the following day at 11.00am for review. Mark the front of the ED folder with a PAU sticker and email cuh.PaedsPauReferral@hse.ie with the patient details and reason for referral in the subject line ie. Neonatal jaundice_ED pathway. The PAU can also be phoned during office hours on the number 22449 (within the hospital).

Type of Jaundice	Causes
Early Onset: (<24 hours) PATHOLOGICAL	Sepsis
	Haemolysis: • Isoimmunisation – ABO or Rhesus D alloantibodies • RBC enzyme defects – G6PD, hereditary spherocytosis, alpha thalassemia • Haemorrhage – cerebral, intra-abdominal • Blood extravasation – (bruising/birth trauma)
Peak Onset (24 hours – 14 days)	Physiological jaundice
	Dehydration/insufficient feeding
	Sepsis
	Haemolysis
	Breastmilk jaundice
	Bruising, birth trauma
Prolonged/ conjugated (>2 weeks)	Sepsis
	Haemolysis
	Dehydration/ insufficient feeding
	Breastmilk jaundice
	Hypothyroidism
Conjugated (At any age point) If conjugated fraction >10% of total bilirubin	Neonatal hepatitis
	Extrahepatic obstruction: Biliary atresia, choledochal cyst, bile plug
	Metabolic
	Drugs/Parenteral nutrition

Table adapted from the Royal Children's Hospital Melbourne guidelines. This list is by no means exhaustive.

References:

1. Clinical practice guideline revision: Management of hyperbilirubinemia in the newborn infant 35 or more weeks of gestation.
   Kemper AR, Newman TB, Slaughter JL, et al. Pediatrics. 2022;150(3):e2022058859. doi: 10.1542/peds.2022-058859. PMID: 35927462
2. The Royal Children's Hospital Melbourne. Available at: https://www.rch.org.au/clinicalguide/guideline_index/jaundice_in_early_infancy/ (Accessed: 09 June 2023).
3. Dräger Jaundice Meter JM-105 | Draeger
4. http://www.perinatalservicesbc.ca/Documents/Screening/BiliaryAtresia/BA_Stool_Card_Print_2023Jan.pdf
5. NICE Phototherapy Chart
6. Screening for hyperbilirubinemia in term and late preterm newborns - UpToDate