



**IRON CHELATION THERAPY**

**GUIDELINES**



# IRON CHELATION TREATMENT GUIDELINES

- Enclosed guidelines have been formulated after a consensus meeting held on March 28, 2009 in Karachi
- Following participants from across Pakistan attended the meeting and gave their valuable input
  - **Prof. Jovaria Mannan** | *(Sir Ganga Ram Hospital, Lahore)*
  - **Prof. Ataulah Mazhar** | *(Bahawalpur Victoria Hospital)*
  - **Dr. Tahir Shamsi** | *(National Institute of Blood Disease, Karachi)*
  - **Dr. Saquib Ansari** | *(National Institute of Blood Disease, Karachi)*
  - **Dr. Zainab** | *(Hussaini Blood Bank, Karachi)*
  - **Dr. Sarfaraz Jafri** | *(Hussaini Blood Bank, Karachi)*
  - **Dr. Waleed Bin Azhar** | *(Fatimid Foundation)*
  - **Dr. Muhammad Aslam** | *(Children Hospital, Multan)*
  - **Dr. Adil Akhtar** | *(Sir Ganga Ram Hospital, Lahore)*
  - **Dr. Rumeela** | *(Zainabia Blood Blank, Hyderabad)*
- Afterwards Prof. Jovaria Mannan, Dr. Adil Akhter and Dr. Tahir Shamsi formulated enclosed guidelines keeping in mind the local needs
- These guidelines have been endorsed by the Advisory Board of Thalassaemia Federation of Pakistan (TFP)

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**Prof. Yasmin Rashid**  
Secretary,  
TFP

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**Prof. Jovaria Mannan**  
Chairperson, Advisory Board  
TFP

# KEY ASSUMPTIONS

Following points should be considered while referring to guidelines

- The dosage mentioned for any iron chelator in the boxes is optimum dosage for that scenario and to achieve that, follow the dosage chart at the end of the document
- Number mentioned against each drug denotes priority and choice order. Switching to next priority drug should be based on resistance / intolerance to prior therapy
- While monitoring serum ferritin, falsely increased readings could be encountered due to following reasons
  - Inadequate dosage of iron chelators
  - Non Compliance with iron chelation
  - Excess of Vitamin C either prior to chelation or in the form of multivitamins
  - Acute flare up of Hepatitis
  - Acute Infections
  - Lab errors (Different labs)
- None of the mentioned iron chelators should be used without careful monitoring of their potential side effects.
- While monitoring serum ferritin, falsely decreased readings could be encountered due to following reasons
  - Lab errors (Elisa or Dilutions)
  - Decreased Vitamin C levels

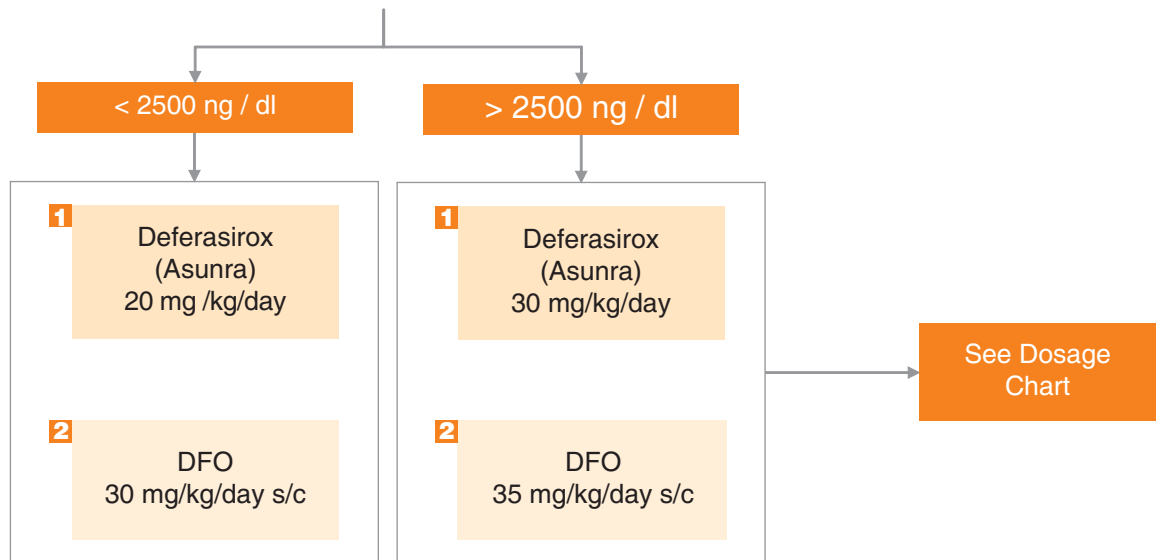
# GUIDELINES FOR STARTING CHELATION THERAPY

1st visit for Chelation

Age: 2 - 3 years

After 10 – 20 transfusions or serum ferritin > 1000 ng/dl

## Baseline Serum Ferritin\*



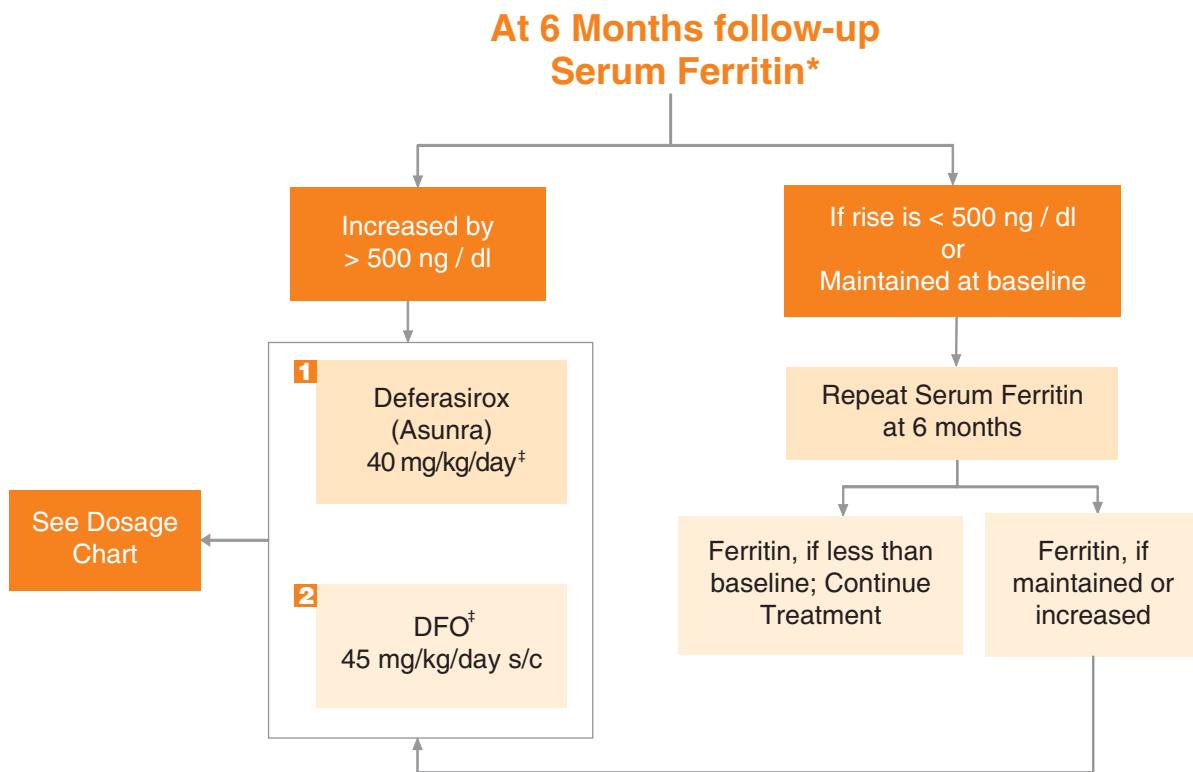
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\*Serum Ferritin:

- Do not do if there is any fever, acute infection of respiratory or GI tract, hepatitis or any other infections
- Follow – up ferritin levels should not be done earlier than 6 months

# GUIDELINES FOR STARTING CHELATION THERAPY

Age: 2 – 3 years



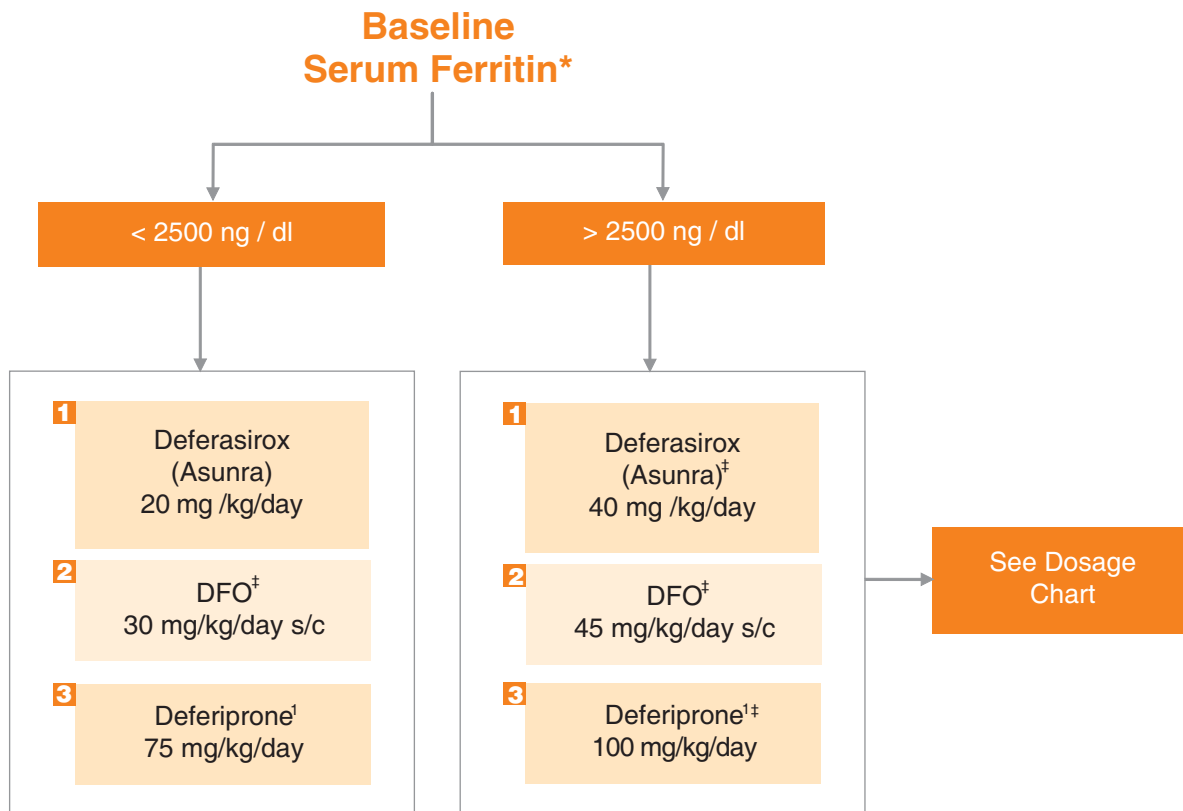
<sup>‡</sup> This is the maximum recommended dose for the given scenario, to achieve this dosage please refer to dosage chart

\*Serum Ferritin:

- Do not do if there is any fever, acute infection of respiratory or GI tract, hepatitis or any other infections
- Follow – up ferritin levels should not be done earlier than 6 months

# GUIDELINES FOR STARTING CHELATION THERAPY

Age: Children with 1st visit for chelation > 3 years



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‡ This is the maximum recommended dose for the given scenario, to achieve this dosage please refer to dosage chart

\*Serum Ferritin:

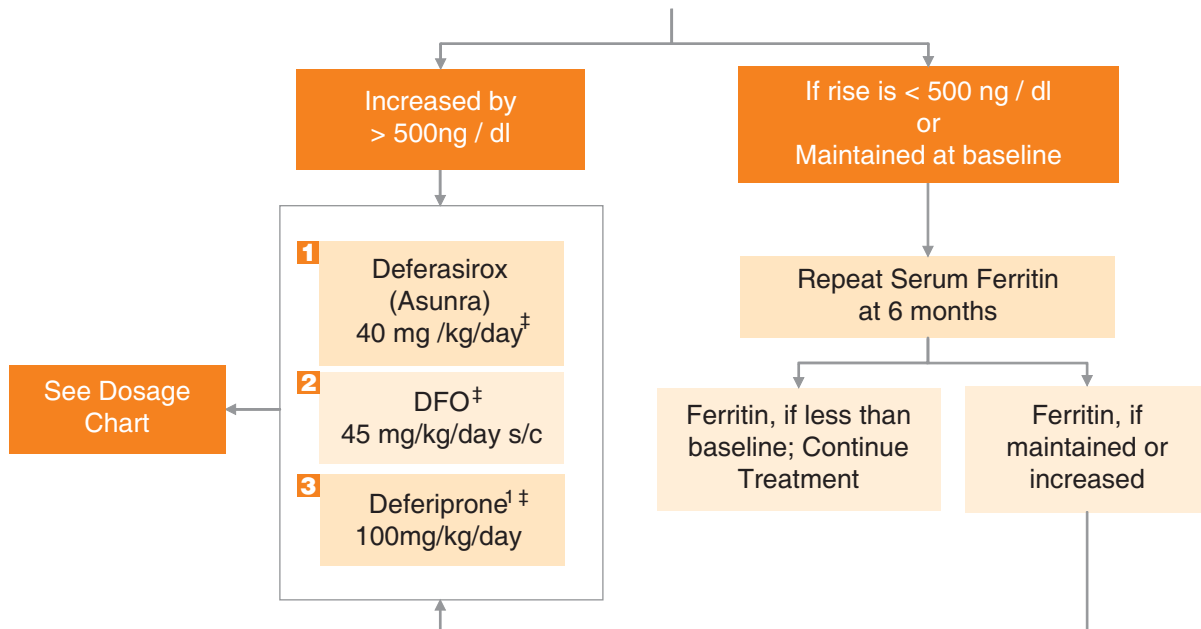
- Do not do if there is any fever, acute infection of respiratory or GI tract, hepatitis or any other infections
- Follow – up ferritin levels should not be done earlier than 6 months

<sup>1</sup>Deferiprone: Should not be considered if weekly CBC monitoring for neutropenia (Absolute Neutrophil Count < 1500 => TLC x % neutrophils) cannot be ensured

# GUIDELINES FOR STARTING CHELATION THERAPY

Age: Children with 1st visit for chelation > 3 years

## At 6 Months follow-up Serum Ferritin\* For Pts <2500 ng / dl at baseline



‡ This is the maximum recommended dose for the given scenario, to achieve this dosage please refer to dosage chart

\*Serum Ferritin:

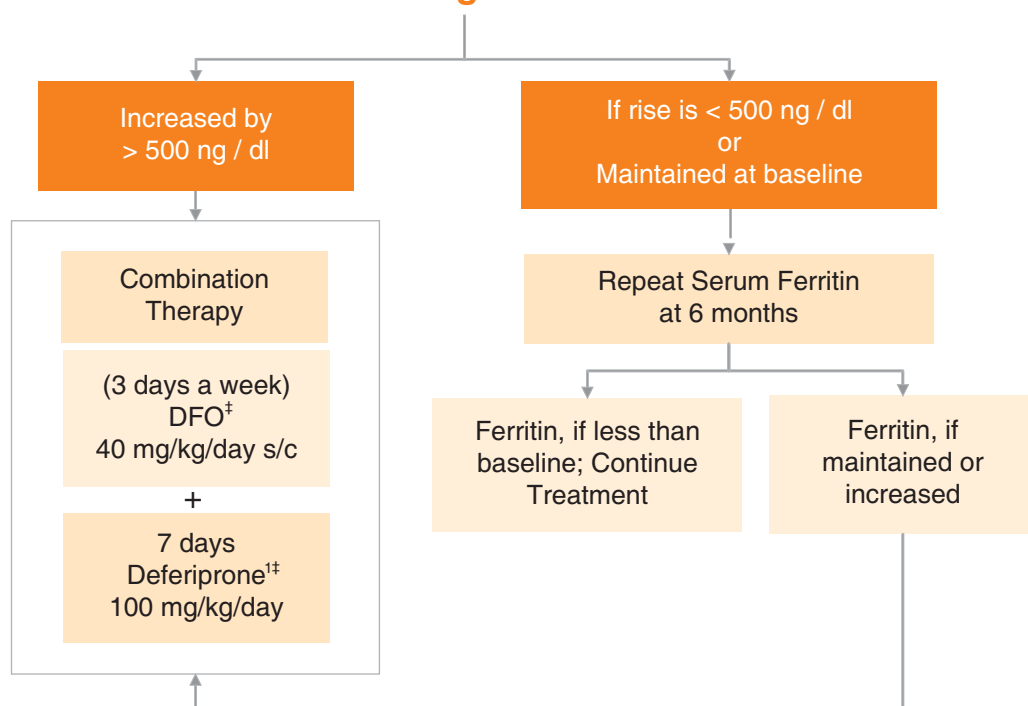
- Do not do if there is any fever, acute infection of respiratory or GI tract, hepatitis or any other infections
- Follow – up ferritin levels should not be done earlier than 6 months



# GUIDELINES FOR STARTING CHELATION THERAPY

Age: Children with 1st visit for chelation > 3 years

## At 6 Months follow-up Serum Ferritin\* For Pts >2500 ng / dl at baseline



‡ This is the maximum recommended dose for the given scenario, to achieve this dosage please refer to dosage chart

\*Serum Ferritin:

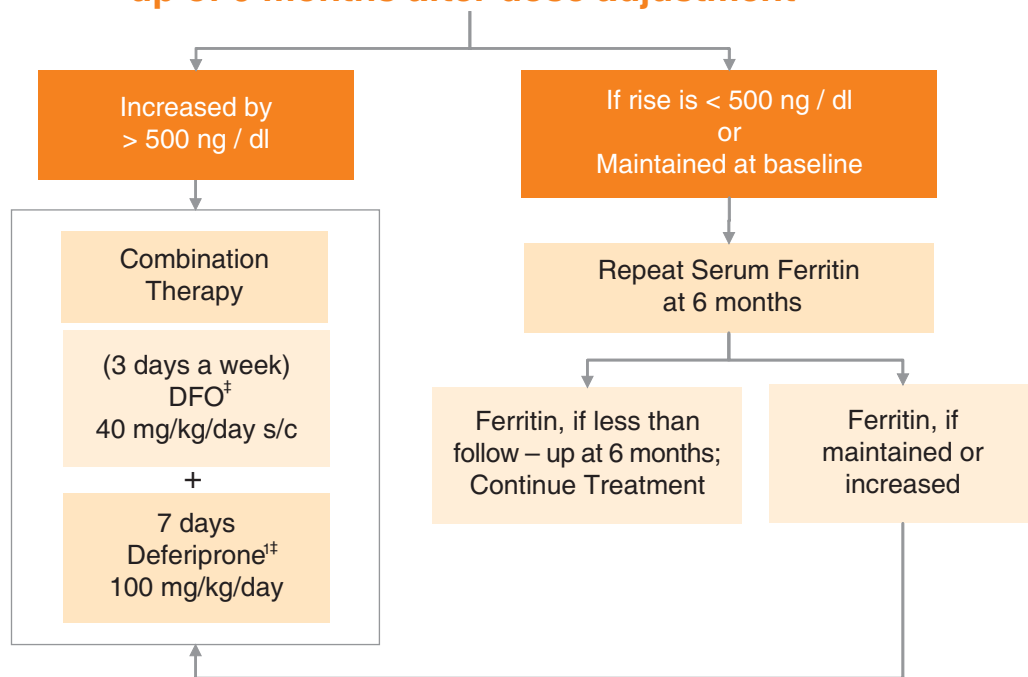
- Do not do if there is any fever, acute infection of respiratory or GI tract, hepatitis or any other infections
- Follow-up ferritin levels should not be done earlier than 6 months

<sup>1</sup>Deferiprone: Should not be considered if weekly CBC monitoring for neutropenia (Absolute Neutrophil Count < 1500 => TLC x % neutrophils) cannot be ensured

# GUIDELINES FOR STARTING CHELATION THERAPY

Age: Children with 1st visit for chelation > 3 years

**At 12 Months follow-up Serum Ferritin\*  
For Pts < 2500 ng / dl at baseline and follow –  
up of 6 months after dose adjustment**



‡ This is the maximum recommended dose for the given scenario, to achieve this dosage please refer to dosage chart

\*Serum Ferritin:

- Do not do if there is any fever, acute infection of respiratory or GI tract, hepatitis or any other infections
- Follow – up ferritin levels should not be done earlier than 6 months

† Deferiprone: Should not be considered if weekly CBC monitoring for neutropenia (Absolute Neutrophil Count < 1500 => TLC x % neutrophils) cannot be ensured

# DOSAGE CHART

Key points to be considered while starting any of the following Iron Chelators

- Deferasirox (Asunra)
  - Always Start at 20 mg / kg / day and escalate according to dosage chart
- Desferal / DFO
  - Always Start at 30 mg / kg / day and escalate according to dosage chart
- Deferiprone
  - Always Start at 75 mg / kg / day and escalate according to dosage chart

Escalation Chart				
Deferasirox (Asunra) (in mg /kg /day)				
20 (start)	25	30	35	40
For 2 weeks	For 2 weeks	For 2 weeks	For 2 weeks	Continue
Desferal / DFO (in mg / kg / day s/c)				
30 (start)	35	40	45	
For 2 weeks	For 2 weeks	For 2 weeks	Continue	
Deferiprone (in mg / kg / day)				
75 (start)		100		
For 2 weeks		Continue		