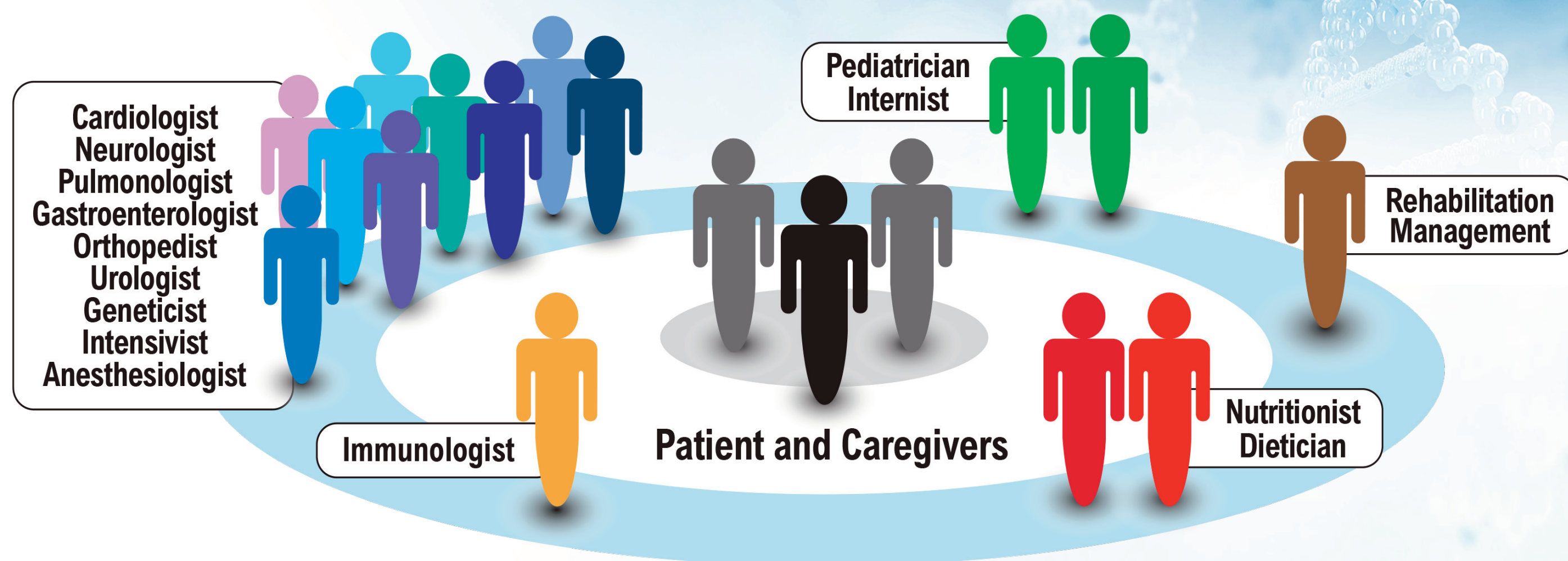
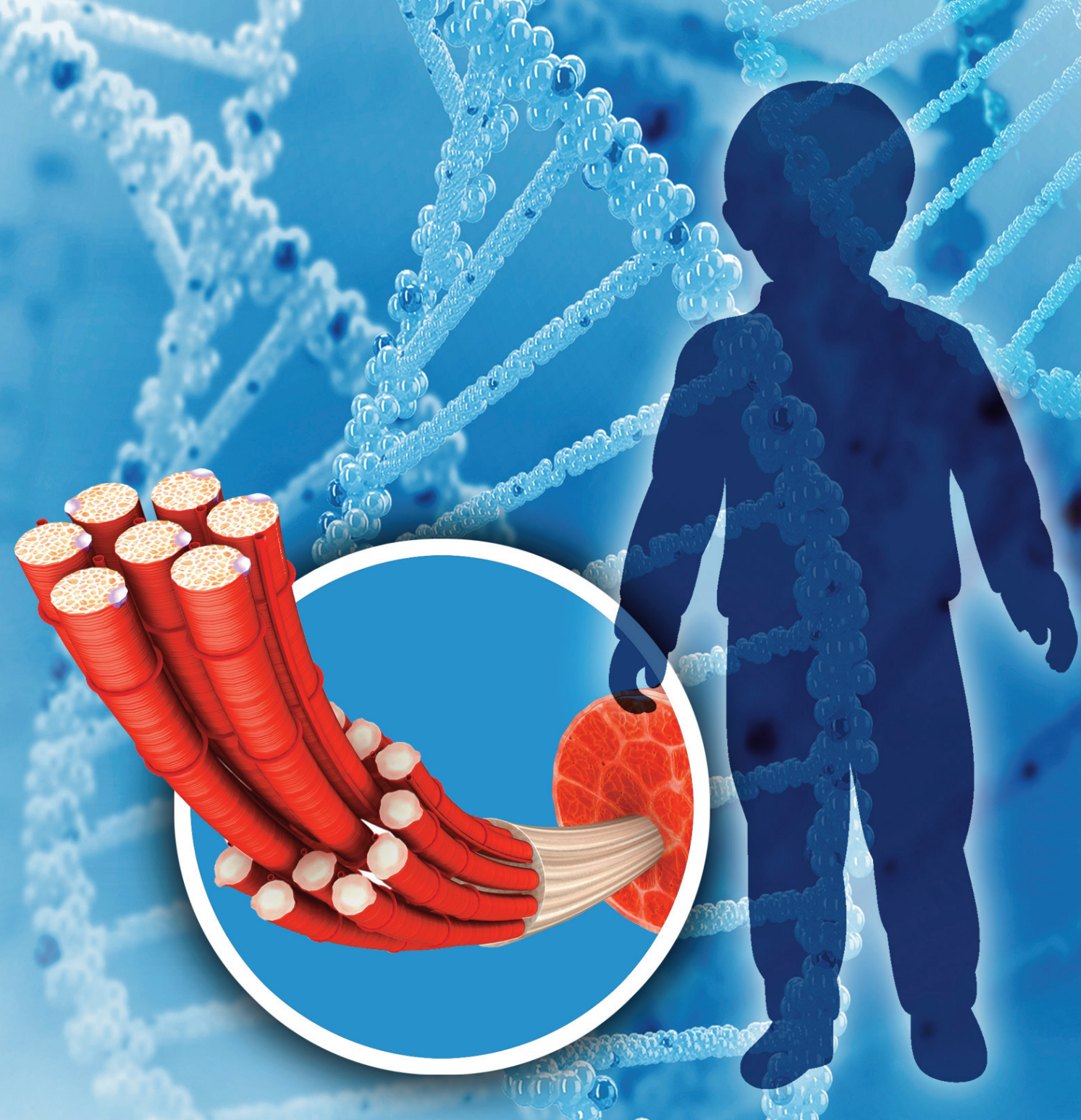


Markers and Measures of Disease Progression in POMPE DISEASE



Measures of Disease Severity and Progression

■ Functional motor scales

- Medical Research Council (MRC) scale
- 6-minute walk test (6MWT)
- Gait, Stairs, Gowers' Maneuver, Chair (GSGC) test
- Quick Motor Function Test (QMFT)
- Rasch-built Pompe-specific Activity (R-PAct) scale

■ Spirometry

- Sitting and supine FVC, MIP, and MEP



Biomarkers



Patient-Reported Outcomes Measures



- Patient-Reported Outcomes Measurement Information System (PROMIS)
- Pompe Disease Severity Scale (PDSS)
- Pompe Disease Impact Scale (PDIS)
- General scales
 - 12-Item Short-Form Health Survey (SF-12)
 - EuroQol-5-Dimension-5-Level (EQ-5D-5L)
 - Patient Global Impression of Change (PGIC)

Infantile-Onset Disease Monitoring

Baseline

- Cardiac status
- Development milestones/physical therapy evaluation
- Respiratory status
- Biomarkers
 - CK, Hex4
- Baseline laboratory results prior to immunomodulation
- Patient-reported outcomes

Ongoing/response to therapy

- Cardiac status: every 1-6 months
- Developmental milestones/physical therapy: at each infusion
- Respiratory status: at each infusion
- Biomarkers: CK, Hex4
 - Every 1-6 months
 - Every 1-2 months when undergoing ITI
- Recovery from immunomodulation
- Antidrug antibodies
 - Every 1-6 months
 - Every 1-2 months when undergoing ITI
 - Every 2 months following CD19 recovery
- Patient-reported outcomes



Late-Onset Disease Monitoring

Baseline

- Motor function evaluation
 - 6MWT
- Respiratory status
 - PFTs, FVC
- Biomarkers
 - CK, Hex4
- Patient-reported outcomes

Ongoing/response to therapy

- Motor function evaluation
 - 6MWT
- Respiratory status: every 6-12 months
- Biomarkers
 - CK, Hex4
- Imaging
 - Muscle MRI/ultrasound
- Patient-reported outcomes



Abbreviations

CK: creatine kinase
 CRIM: cross-reactive immunologic material
 FVC: forced vital capacity
 Hex4: urinary glucose tetrasaccharide
 MIP: maximal inspiratory pressure
 MEP: maximal expiratory pressure
 MRI: magnetic resonance imaging
 PFT: pulmonary function test

References

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 Kishnani PS, et al. *Genet Med.* 2006;8:267-288.