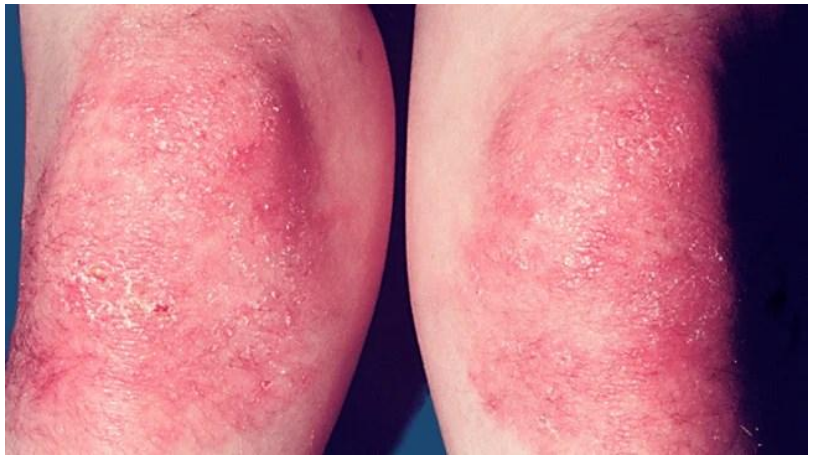
Dermatomyositis market dynamics: An in-depth analysis of diagnostics, therapeutics, and future outlook



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Business Questions

- Disease overview and its management
- What is the current and futuristic market size?
- Competitors' impact on current therapies

Dermatomyositis: An Overview

Rare autoimmune disease-causing skin rashes and muscle weakness

- Dermatomyositis is a complex and rare autoimmune disease.
- Characterized by muscle weakness and distinctive skin rashes.
- Symptoms may include proximal muscle weakness and pain, itchy and painful skin manifestations [1]

Types of dermatomyositis (DM)

Adermatopathic dermatomyositis:	**Myopathic dermatomyositis:**	**Amyopathic dermatomyositis:**
DM without skin rash.	Skin rash together with muscle weakness.	DM without muscle weakness [2]

Prevalent patients (2023[3]) ~72k

Treated patients (2023[4]) ~35k

Stages of dermatomyositis

- **Early stage:** Skin rash appears. Fatigue, mild symptoms.
- **Muscle Involvement stage:** Muscle weakness starts. High muscle enzyme levels in blood.
- **Progressive stage:** Symptoms worsen. Possible lung issues, joint pain, swallowing problems.
- **Chronic/late stage:** Long-term muscle damage or weakness. Higher risk of cancer in adults.

1.Disease overview
2.Types of DM
3.Prevalence of dermatomyositis
4.Treatment

Diagnostic Tests

No gold standards of diagnosis till date making diagnosis difficult

Skin assessment

May include lesion photos and a biopsy under local anesthesia.

Magnetic resonance imaging

Scans that use magnetic fields to visualize tissues of leg muscles

Pulmonary function tests

Possibly a chest X-ray are used to assess lung function.

Eye examination

For vision loss or other eye symptoms.

Nutrition assessment

For muscle mass, includes tape measurements and a painless test using wires and sticky paste on the limbs. [1]

1 Diagnostic tests

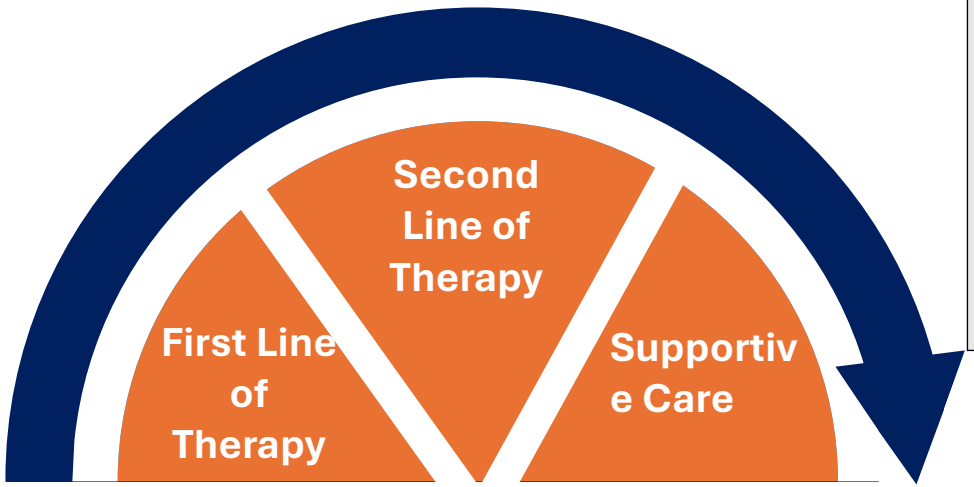
Treatment Algorithm

G.C and immunosuppressants are most widely used treatment options along with only single FDA Approved drug for this indication

- **High-dose glucocorticoids** for muscle disease.
- **Immunosuppressants** for severe or systemic cases.
- **Steroids** after 6–12 weeks once muscle strength improves and enzymes drop.

Escalate treatment:

- **IVIG**, azathioprine + methotrexate.
- Refractory ILD: Mycophenolate mofetil, tacrolimus.
- Progressive ILD: Cyclophosphamide.

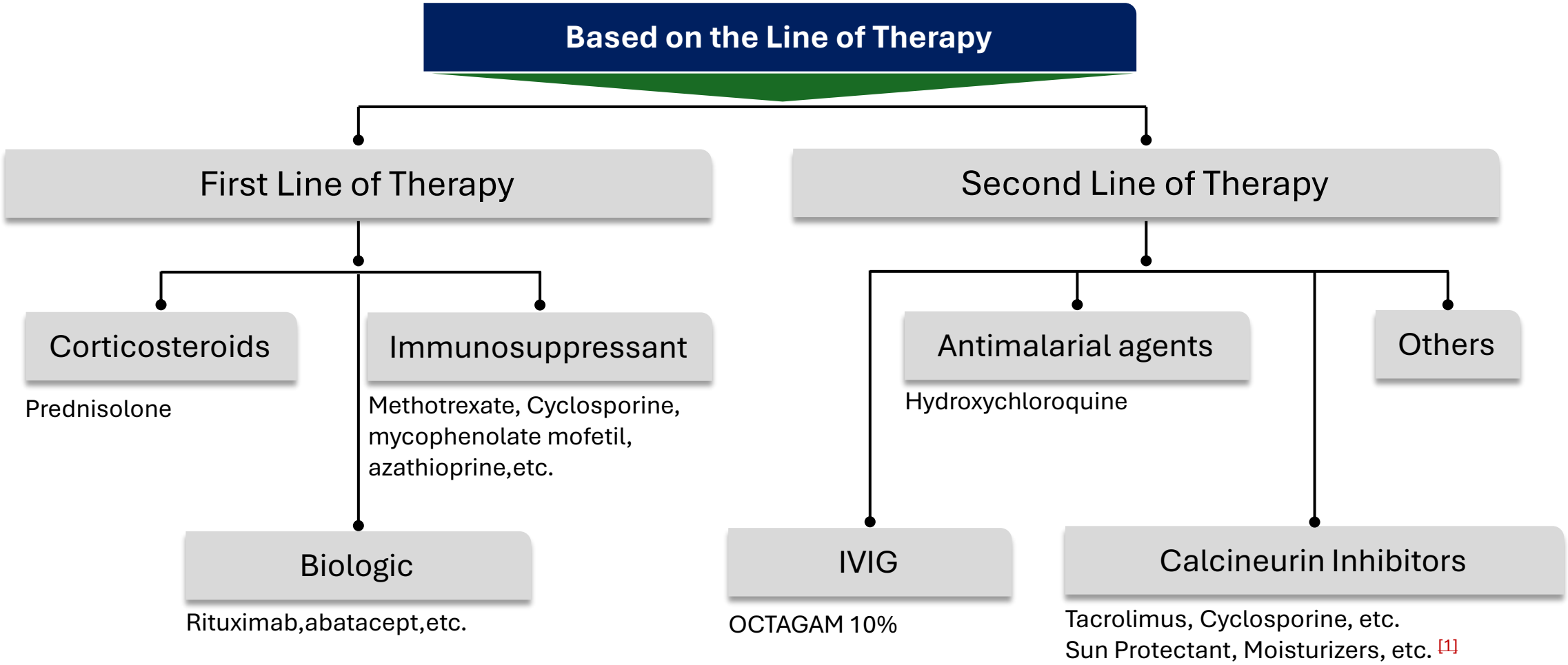


- **Physical therapy** for strength and flexibility.
- **Anti-aspiration measures**, speech therapy.
- **Calcinosis**: Diltiazem, surgical removal if severe. [1]

1. *Treatment Algorithm*

Current Therapies

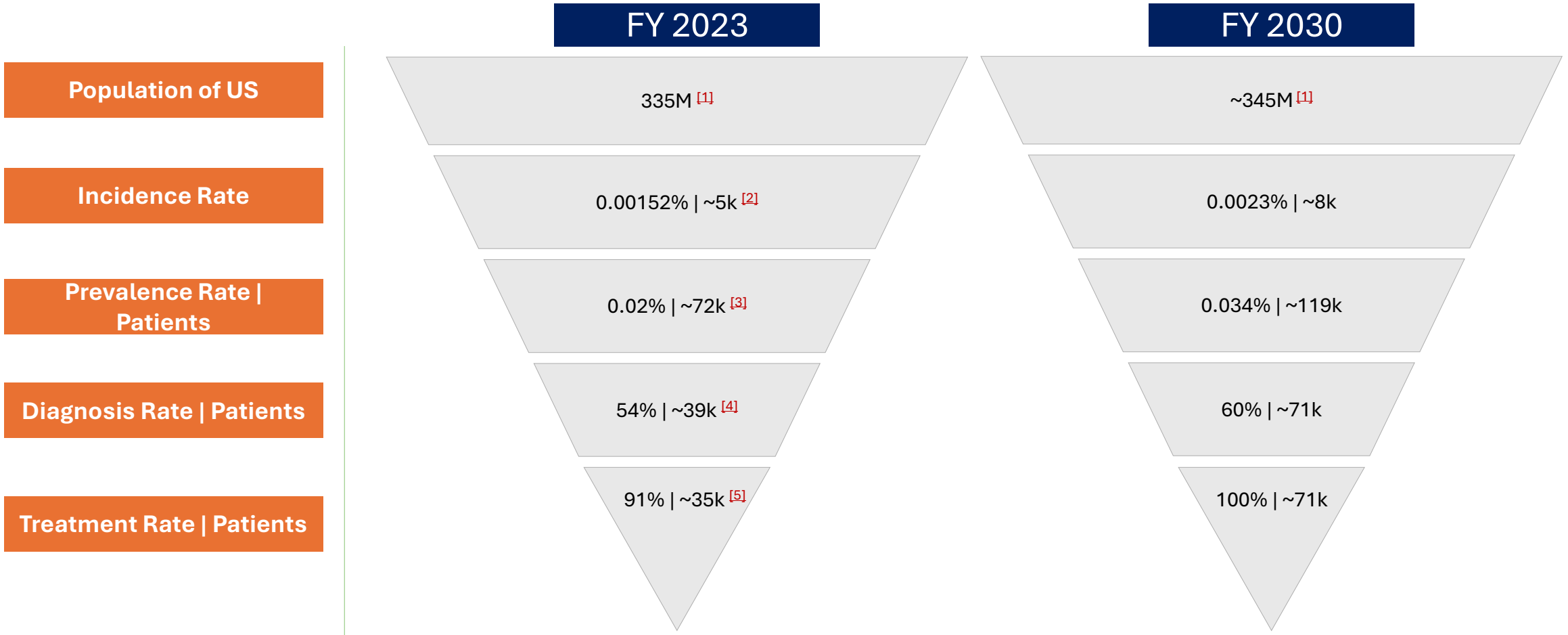
Octagam used in the second line of therapy along with other miscellaneous therapies



1. Current therapies

Current and Futuristic Market

Lesser percentage of diagnosed patients indicating proper standards for diagnosis.



1. *Population of US*
2. *Incidence Rate*
3. *Prevalence rate*
4. *Diagnostic Rate*
5. *Treatment Rate*

Key Players in the Market

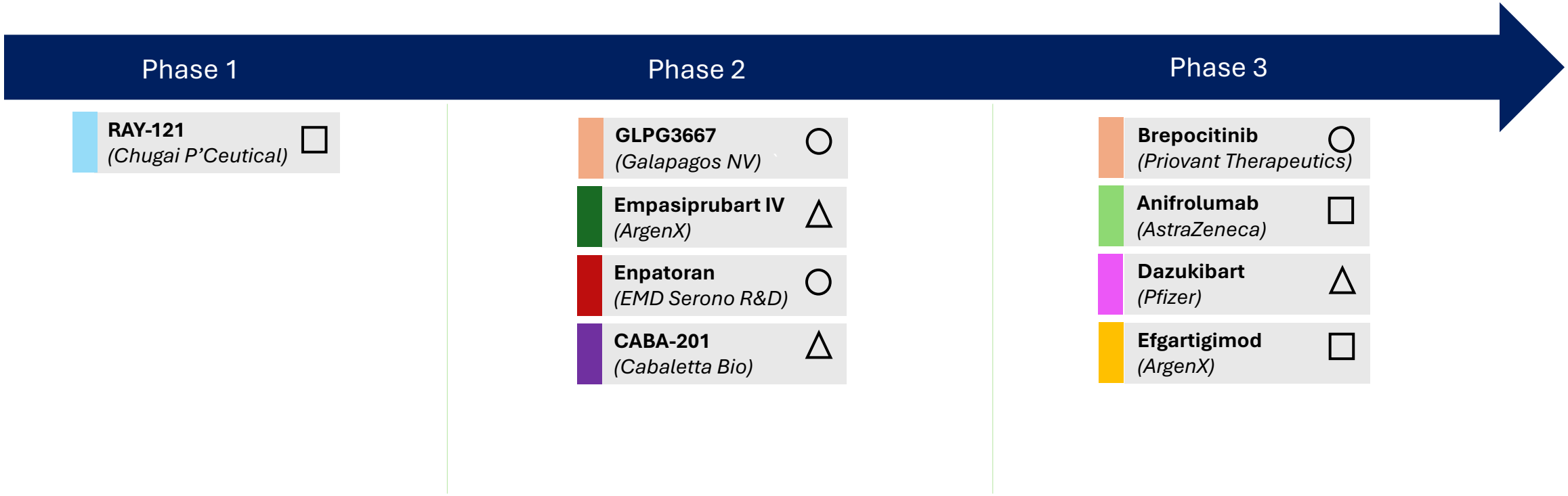
Octagam 10 is the sole player in the market for this indication along with other off-label drugs

	Drug	Company	Mechanism of Action	Route of Administration	Doses	Annual Cost of Therapy
FDA Approved Drug	**Octagam 10%**	Pfizer	Amyloid beta-protein inhibitors; Immunostimulants	Intravenous	5 mg twice daily.	$386,750 [12] [13]
Off-Label Drugs	**Prednisolone**	Various Manufacturers	Glucocorticoid receptor agonists	Oral	0.5-1 mg/kg/day	$128 [5] [6]
	Methotrexate	Various Manufacturers	Tetrahydrofolate dehydrogenase inhibitors	Oral	2.5-30 mg weekly	$78-$937 [7] [8]
	Rituximab (Rituxan)	Genentech	Antibody-dependent cell cytotoxicity; T lymphocyte stimulants	Intravenous	376 mg/m^2 Once weekly for 4 weeks	$19,452 [1] [2]
	Hydroxychloroquine	Sanofi	Antimetabolites; Phospholipase A2 inhibitors	Oral	6.5 mg/kg/day for 8 weeks	$189 [9] [10]
	Cyclosporine	Novartis	Calcineurin inhibitors; Immunomodulators	Oral	2 doses, each of 1000 mg,2 weeks apart	$2,618 [11] [12]

1. Sources in description

Pipeline Analysis

Major players in phase two and three pf the trial process showing the potential treatment option



Mechanism of Action	
Complement system protein inhibitors	Immunologic cytotoxicity; T lymphocyte replacements
TYK2 kinase inhibitors	Interferon alpha beta receptor antagonists
Complement C2 inhibitors	Interferon beta inhibitors
Toll-like receptor 7 & 8 antagonists	Neonatal Fc receptor antagonists

ROA
Oral
Subcutaneous
Intravenous

1. *Pipeline drugs*
2. *Mechanism of action*
3. *FDA approval of octagam*

Competitors' impact on the current therapies

Patients may shift from current therapies to future therapies due to majority of factors

Preference for Convenient Administration:	Oral or subcutaneous options like RAY-121, GLPG3667, and Brepocitinib may reduce demand for Octagam's IV treatment.
Targeted Mechanisms of Action	Competitors offering safer alternatives, thus more precise treatments than Octagam's broad approach.
Pricing and Affordability:	Octagam's high cost may push patients toward more affordable oral or subcutaneous alternatives. [1] [2]
Market Share	New therapies may reduce Octagam's market share by increasing treatment options for dermatomyositis.
Safety:	Supply issues, side effects, and infection risks may shift preference toward safer, targeted alternatives.

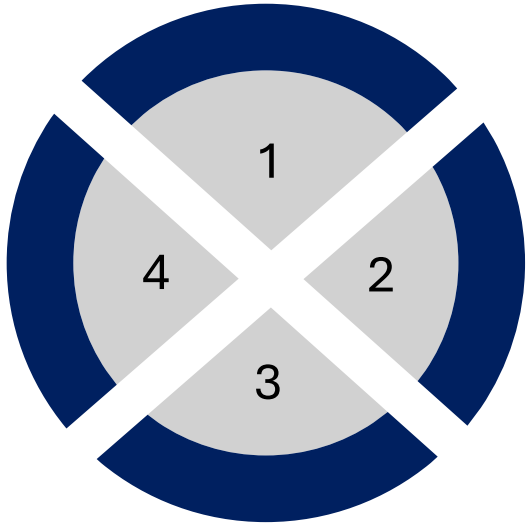
1. *Price of octagam*
2. *Dose of Octagam*

Unmet Needs

Lack of awareness, no standard diagnosis options and limited treatment are the major gaps in the market

Awareness along with better tools, and specific tests, are needed for quicker, more accurate detection.

Need for validated biomarkers to identify high-risk patients who would benefit most from screening. [1]



Existing treatments are broadly immunosuppressive and not disease-specific.

Multiple novel agents in development, but more **clinical validation** is needed. [1]

1. *Unmet needs*

Conclusion

Being a rare disease indicating a robust R&D in all aspects implicating promising future growth in this market

Dermatomyositis (DM) is a rare, progressive, and debilitating type of idiopathic inflammatory myopathy.

There is a pressing need for the development of validated biomarkers, improved diagnostic tools.

More clinical validation of emerging therapies to enhance early detection and personalized care.

Thank You ☺