

Advancements In Hypertension Treatment

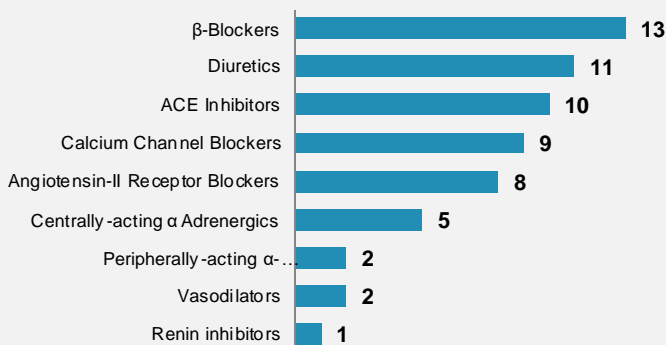
Current And Future Therapy Overview

One in six adults in the US are affected by hypertension, contributing to the loss of 2 million American lives annually.

While current antihypertensive medications focus on managing hypertension, there is a pressing demand for the discovery of curative therapies. The existing clinical landscape is undergoing transformation with the aim of finding novel targets, enhancing the efficacy of medications available at present, and develop innovative therapies with minimal side effects.

CURRENT LANDSCAPE

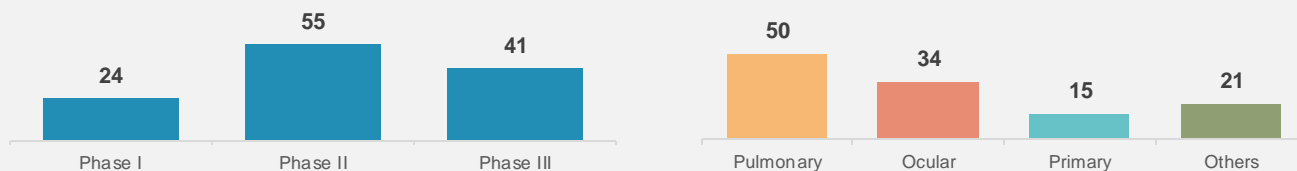
As of 2023, US FDA has approved 62 antihypertensives under 9 different drug classes. The current therapy aims to reduce the risk of severe hypertension and cerebrovascular accidents.



- The main classes of antihypertensives, usually the first line of treatment for hypertension, are as follows:
 - Calcium Channel Blockers (Amlodipine, Diltiazem, Nifedipine, etc.)
 - ACE Inhibitors (Lisinopril, Ramipril, Captopril, etc.)
 - Angiotensin Receptor Blockers (Losartan, Olmesartan, Telmisartan, etc.)
 - Diuretics (Hydrochlorothiazide, Chlorthalidone, Indapamide, etc.)
- Existing therapies also include β-blockers, centrally acting α-adrenergics, peripherally acting α-adrenergic blockers, vasodilators, and renin inhibitor.

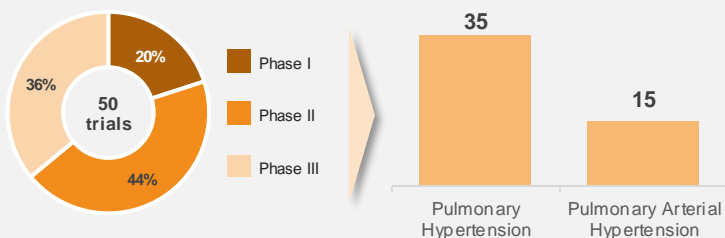
CLINICAL LANDSCAPE

Among the 120 clinical trials conducted since 2018, ~50 were focused on pulmonary hypertension (PH), 34 on ocular conditions, and 15 on primary hypertension.



I. PULMONARY HYPERTENSION

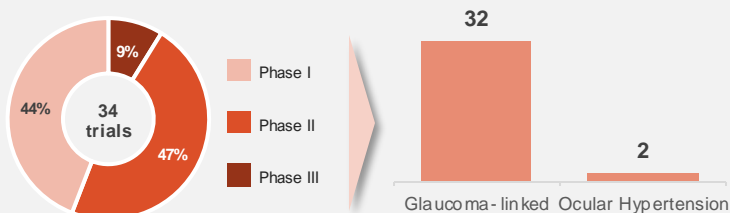
Around 14 new chemical entities (NCEs) in clinical stages II and III are dedicated to address PH and pulmonary arterial hypertension (PAH). These endeavors encompass 50 trials in total, collectively undertaken by 17 pharmaceutical companies.



- Acceleron Pharma is investigating a promising biologic **Sotatercept** for PH and PAH in Phases II and III.
- **Treprostinil** (prostacyclin vasodilator) by Insmed and **Selexipag** (prostacyclin receptor agonist) by Actelion are novel therapies for PH and PAH that are under investigation.
- **Imatinib** by Aerovate Therapeutics, **Ralinepag** by United Therapeutics, and **Levosimendan** by Tenax Therapeutics show significant potential as PAH treatments.

II. OCULAR HYPERTENSION

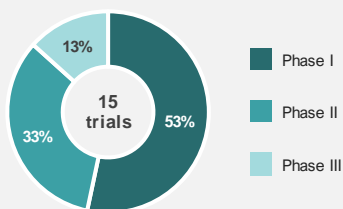
The primary focus of ocular hypertension (OH) lies in glaucoma-linked ocular hypertension. About 23 players have conducted 34 clinical trials since 2018.



- For glaucoma-linked OH, **QLS-101** (KATP channel modulator) by Qlaris Bio, **DE-117** (EP2 receptor agonist) by Santen Inc., and **VVN539** (Rho kinase inhibitor) by VivaVision Biotech are NCEs under investigation.
- About 13 out of 34 trials are studying **prostaglandin analogues**, viz. bimatoprost, latanoprost, and travoprost.

III. PRIMARY HYPERTENSION

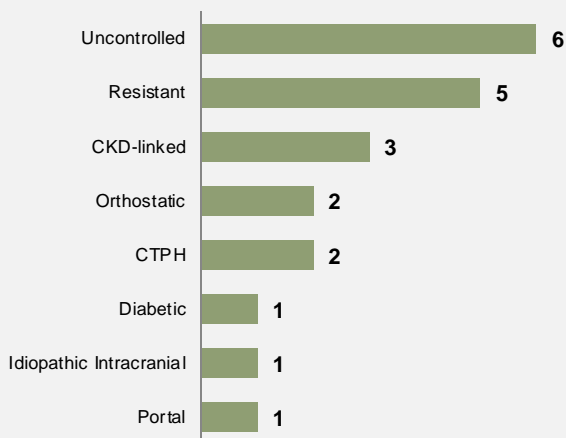
Approximately 53% trials are in Phase I with a total of 15 trials underway.



- **Zilebesiran**, a novel RNA interference agent by Alnylam Pharmaceuticals, is in Phase II.
- Cincor Pharma's candidate **baxdrostat**, (aldosterone synthase inhibitor) showed promising Phase 1 results, leading to acquisition by AstraZeneca in 2023. Phase II trials are underway.
- **IONIS AGT LRx**, a ligand conjugated antisense oligonucleotide by Ionis Pharmaceuticals, demonstrated promising Phase 2 results.

IV. OTHER TYPES

A total of **13** innovative treatments are under clinical investigation for various forms of hypertension. Among these, **11** out of **21** clinical studies specifically focus on hypertension that is uncontrolled and resistant in nature.



- Trials for uncontrolled, diabetic, and portal hypertension are in Phase II, while orthostatic hypertension studies are in Phase I. Among the five trials targeting resistant hypertension, two are in Phases II and III each.
- One trial for CKD-linked hypertension is in Phase III and two are in Phase II. All chronic thromboembolic pulmonary hypertension (CTPH) and idiopathic intracranial trials are in Phase III.
- Mineralys Therapeutics is developing **lorundrostat**, a precise aldosterone synthase inhibitor, for uncontrolled hypertension.
- Novartis Pharmaceuticals is in Phase II development of **XXB750**, a biologic for treating resistant hypertension.
- E-Star BioTech achieved Phase 1 success with **MANP** (M-atrial natriuretic peptide), a new atrial natriuretic peptide, for resistant hypertension.
- KBP Biosciences is investigating **KBP-5074**, a novel non-steroidal Mineralocorticoid receptor antagonist for CKD-linked hypertension.

Right from understanding key issues to advising you through the right set of insights and recommendations, Aranca provides research, consolidation, and insightful analysis to aid in-depth understanding of therapy and effective decision-making.

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Epidemiological Analysis: Prevalence and diagnosis of diseases based on geography, gender, race and ethnicity, etc.

02

Diagnosis and Treatment Paradigm: Analysis of diagnosis and treatment algorithm adopted in clinical practice

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Current and Future Landscape: Current treatments and latest pipeline landscape assessment for a particular therapy area

04

Humanistic, Economic Burden, and Unmet Need Analysis: Impact of a disease on the patient's mental and economic well-being

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