

# Temporal Identification of Early Comorbidities for Enhanced Detection of ATTRwt-CM: A Medicare Analysis

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## INTRODUCTION

- The overall prevalence of transthyretin amyloid cardiomyopathy (ATTR-CM) has been reported as ~6.1 per million in the United States. It is estimated that 10–12% of patients with heart failure have ATTR-CM.<sup>1,2</sup>
- Without treatment, median survival ranges approximately from 3.6 to 4.8 years after the diagnosis of ATTRwt-CM.<sup>3,4</sup> Prompt diagnosis and early initiation of treatment are crucial for improving outcomes for patients.
- Despite recent diagnostic advances, many patients still experience delays in diagnosis.<sup>5,6</sup>
- Clinical diagnoses that commonly precede wild-type ATTR-CM (ATTRwt-CM) span a range of biologic systems (cardiac, musculoskeletal, neurologic, renal, gastrointestinal, ocular) and can be diagnosed several years in advance of an ATTRwt-CM diagnosis.<sup>7,8</sup>

## OBJECTIVE

- We sought to identify cardiac and non-cardiac conditions that most commonly occur in patients with ATTRwt-CM vs those with non-amyloid heart failure (HF) and examine the temporal relationship between the occurrence of these clinical diagnoses and ATTRwt-CM diagnosis using data from Medicare's Fee for Service (FFS).

## METHODS

- This retrospective analysis used US Centers for Medicare & Medicaid Services 100% Medicare FFS claims data from October 1, 2015 to December 31, 2024.
- Patients aged ≥65 years enrolled in Medicare Parts A and B for ≥5 years with ≥2 ATTRwt-CM claims were included.
- Exclusion criteria included prior ATTRwt-CM or other amyloidosis diagnoses.
- The earliest occurrence of each clinical diagnosis during the 5-year period prior to ATTRwt-CM diagnosis was reported by time interval (<=1, >1 to <=3, and >3 to <=5 years prior).

## RESULTS

### Baseline Characteristics

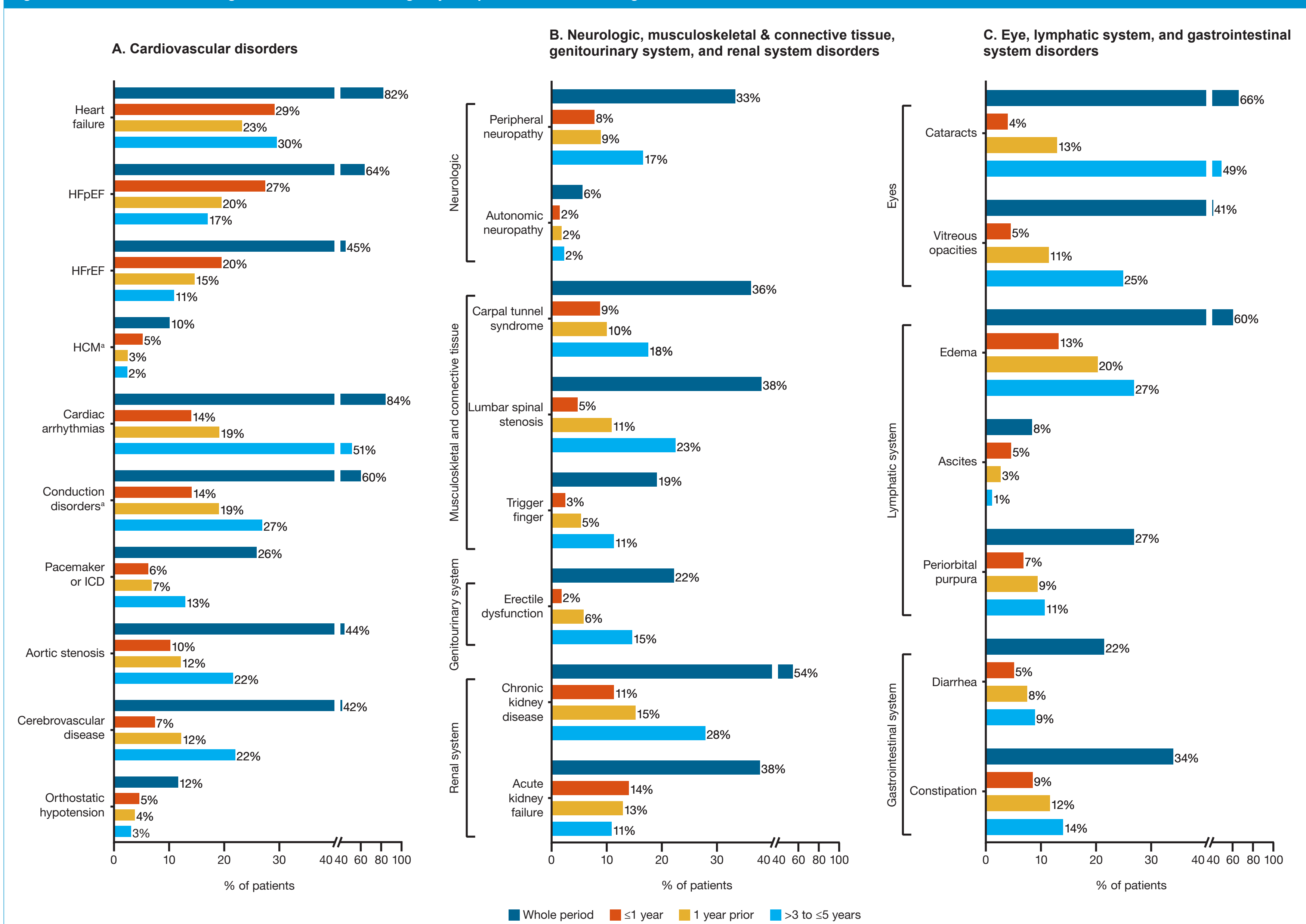
- A total of 4982 patients with ATTRwt-CM were included.
- Median age at diagnosis was 82 years, the majority of patients were ≥75 years, and 81% were male (Table 1).

### Temporal Trends

- For most clinical diagnoses, initial claims occurred most often between 3 and 5 years prior to ATTRwt-CM diagnosis (Figure 1), including well-known red flags such as carpal tunnel syndrome, trigger finger, and lumbar spinal stenosis.
- The exceptions to this were HF, HF with preserved ejection fraction (EF), HF with reduced EF, hypertrophic cardiomyopathy, orthostatic hypotension, autonomic neuropathy, acute kidney failure, and ascites (Figure 1); for these clinical diagnoses, the incidence observed ≤1 year prior to ATTR-CM diagnosis was similar or higher than that observed 3 to 5 years prior.

- Incidence of claims for autonomic neuropathy was similar across all 3 time periods (Figure 1).

Figure 1: Incidence of clinical diagnoses of interest occurring ≤5 years prior to ATTRwt-CM diagnosis



<sup>a</sup> N=4942. Diagnoses of the same clinical feature during >1 timeframe were possible. ATTRwt-CM=wild-type transthyretin amyloid cardiomyopathy; HCM=hypertrophic cardiomyopathy; HFp/EF=heart failure with reduced/preserved ejection fraction; ICD=implantable cardioverter-defibrillator

Table 1: Demographic and regional characteristics (N=4982)

Characteristic	Value
Age, years	81.86 (6.14)
Mean (SD)	81.86 (6.14)
Median (Q1, Q3)	81.82 (77.18, 86.17)
Age range, n (%)	
65–74 years	756 (15.2)
75–84 years	2645 (53.1)
≥85 years	1581 (31.7)
Sex, n (%)	
Men	4041 (81.1)
Women	941 (18.9)
US region, n (%)	
Northeast	1451 (29.1)
Midwest	974 (19.6)
South	1564 (31.4)
West	993 (19.9)

Q=quartile

## CONCLUSIONS

- The majority of clinical diagnoses included in this study occurred 3 to 5 years prior to ATTRwt-CM diagnosis, regardless of which organs were affected.
- Notable exceptions included different forms of HF, hypertrophic cardiomyopathy, autonomic neuropathy, and acute kidney failure.
  - Possibly due to overlapping symptoms or misdiagnosis, patients often receive a diagnosis of HF or cardiomyopathy before being diagnosed with ATTRwt-CM.
- Identifying amyloid-related clinical diagnoses commonly occurring prior to diagnosis of ATTRwt-CM and recognizing their timing may provide an opportunity for earlier diagnosis, therefore paving the way for timely treatment.

## REFERENCES

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## DISCLOSURES

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