

# Increased Relapse Frequency in Females with Pediatric Onset Multiple Sclerosis

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## Background

- Pediatric onset multiple sclerosis (POMS) has been increasingly recognized over the last fifteen years.
- The Center for Pediatric Onset Demyelinating Disease (CPODD) at the University of Alabama at Birmingham was established in 2006 to provide initial, follow-up and consultative care children and adolescents with POMS and related demyelinating disorders.
- A multi-disciplinary team of experts includes a pediatric neurologist expert, an adult neurology expert, a multiple sclerosis certified advance practice nurse, a neuropsychologist and a child psychiatrist
- Referrals are made to the pediatric rehabilitation, urology, occupational therapy, physical therapy, speech therapy and sleep disorders clinic when necessary



- 359 patients were seen in CPODD from January 1, 2006 to December 31, 2013
- 49% of the patients seen at CPODD were Alabama residents
- 60% were Caucasian (N=216); 35% were African American (N=128); remaining 5% were either Asian or Hispanic(N=15)

## Objective

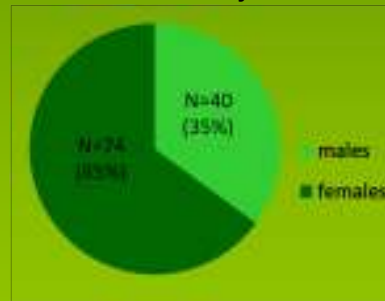
To characterize POMS patients evaluated at CPODD from January 1, 2006 to December 31, 2013

## Methods

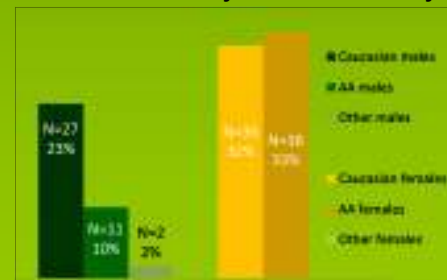
- The electronic medical record of 359 patients that were seen at CPODD were systematically reviewed with respect to diagnosis using the 2012 International Pediatric MS Study Group diagnostic criteria
- 114 (N=31%) developed POMS by definition. Analysis was then made with respect to age of onset, sex, ethnicity, initial symptoms, and number of exacerbations within the first two years of initial presentation as well as disease modifying therapy (DMT).

## Results

POMS Patients By Gender



POMS Patients By Gender & Ethnicity

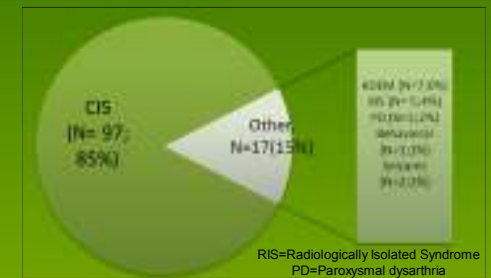


Age at Symptom Onset (Mean Age =13.3 ± 4 )

Age Group	Percentage (%)	Count (N)
≤10 years of age	22%	25
11-14 years of age	41%	47
15-18 years of age	37%	42

## Results Continued

Diagnosis at Initial Presentation



Number of Exacerbations for Patients with Follow-up >2 Years (N=78, 68%)

# of Exacerbations	Females	Males	Total # of Patients
0	22(60%)	15(40%)	37(47%)
1	16(70%)	7(30%)	23 (30%)
2	5(50%)	5(50%)	10(13%)
≥3	8(100%)	0(0%)	8(10%)
Total # by Sex	51(65%)	27(35%)	78

## Conclusion

- POMS in the southern US cohort was predominantly female and > age 11 at symptom onset
- Similar to adults, the typical presentation is CIS
- > 75% of the patients experience ≤ 1 relapse within the first two years after symptom onset
- Females have a higher number of relapses than males, however data is statistically insignificant (chi square p >.05; p=.07)
- Long term follow-up for all patients is needed to report significant trends in this small population