Alzheimer’s Disease in Down Syndrome | Latest Updates

NDSC Annual Convention GLOBAL Research and Medical Care Roundtable
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Population of People with DS in the USA, 1950-2013

Li et al, 2013
Mean age of dementia diagnosis in DS is 54 years

90% lifetime risk for developing AD dementia

Strydom et al, 2017
But Amyloid PET positivity begins at age 35 years
Trisomy 21 leads to excess APP gene and APP protein

Individuals with mosaic DS without extra APP do not develop AD
Amyloid plaques begin developing in DS by the age of 14 years.
Areas with greater tau burden have less regional glucose metabolism

Rafii et al, 2017
Changes related to Alzheimer’s disease begin 15-20 years prior to the onset of symptoms
Important Questions for Clinical Trials

• How will removal of amyloid (and/or tau) impact cognitive and functional measures in addition to biomarkers?

• How does the manifestation of AD in DS impact the safety profile of various treatments, including immunotherapies?

• How early in the course of AD in DS does treatment need to begin and for how long should it continue in order to show efficacy?

• What will regulatory agencies consider appropriate outcomes for AD in DS within the new FDA framework on drug approval for ‘Early AD’?
ACTC-DS: A CLINICAL TRIALS PLATFORM TO PREVENT AD IN DS

15 international performance sites with experience in AD and DS clinical research. $4.7 Million award from NIH INCLUDE
Randomize

Treatment
Placebo

RCT 1

Randomize

Treatment
Placebo

RCT 2

Randomize

Treatment
Placebo

RCT 3

NIH DS Connect Registry

Direct Recruitment

Trial Ready Cohort
Down Syndrome (TRC-DS)

ABC-DS
Flattening the Curve of AD in DS
Conclusions

• New treatments for AD in DS are urgently needed and the NIH INCLUDE initiative is accelerating our ability to meet this need with ACTC-DS.

• Very exciting time in AD research- Aducanumab is being reviewed by FDA for possible approval.

• ACTC-DS sites provide unparalleled experience in conducting RCTs for AD in DS.

• TRC-DS will enable rapid-enrollment into trials for AD in DS

  www.actc-ds.org