4.1. Participant Eligibility

In accordance with NIH directives and the specific aims of this study, strenuous effort will be made to recruit and retain participants representative of US populations that experience health disparities, with particular attention to individuals of African-American and Hispanic descent (*see 3.3. Recruitment Strategy*). In addition, sites will aim to enroll a mix of participants representative of a broad range of education, demographic, and socio-economic statuses within the US. Pediatric patients (age <18 years at time of index acute stroke) will be excluded due to the scientific focus of the study. Potential participants will be identified based on the following criteria:

4.1.1. Inclusion Criteria

1. Age ≥18 years
2. Admitted to the hospital with a diagnosis of AIS, ICH, or aSAH
3. Radiographic confirmatory evidence of: (1) AIS (based on a focal area of restricted diffusion on MRI), (2) non-traumatic primary ICH (based on evidence of acute parenchymal hemorrhage CT or brain MRI) or (3) non-traumatic acute aSAH (based on evidence of subarachnoid hemorrhage on CT or MRI and evidence of aneurysm on CT angiography, MR angiography, or conventional catheter-based angiography)
4. Able to complete baseline visit in person or by phone within 6 weeks of stroke onset
5. Able to provide informed consent by self or proxy
6. Fluent in English or Spanish prior to stroke onset

4.1.2. Exclusion Criteria

1. Documented history of pre-stroke dementia or fails dementia pre-screen
2. Concurrently enrolled into a study that is not approved under the DISCOVERY Co-Enrollment Policy
3. Unable to complete study protocol (advanced directives such as comfort measures only, or inability to complete the study due to severe medical/behavioral co-morbidities), as determined by physician investigator during screening process

Additional exclusion criteria for Tier 2 participants:

4. Contraindication to MRI: presence of electrically, magnetically, or mechanically activated implants (such as cardiac pacemakers, cochlear implants, implanted pumps); or metallic clips in the brain

Additional exclusion criteria for Tier 3 participants:

5. Age <50 years
6. Women who are pregnant or seeking to become pregnant
7. Known to have one of the following genetic conditions which can increase the risk of developing cancer: Cowden disease, Lynch syndrome, hypogammaglobulinemia, Wiskott-Aldrich syndrome, Down's syndrome.

4.2. Screening and Recruitment Procedures

Screening and recruitment will occur at DISCOVERY CPSs with close oversight provided by the DISCOVERY RRC. Sites will strive for consecutive patient recruitment to reduce risk of selection bias. Standardized screening logs will be used to track screening activities and capture all

qualifying stroke admissions at each CPS, including patient demographics, stroke type (AIS, ICH, aSAH), markers of stroke severity and specific reason for screen fail or refusal.

All acute stroke patients will be considered for enrollment during admission for index stroke, but no later than 6 weeks after stroke onset, and identified by a trained member of the DISCOVERY CPS research team through daily screening of hospital patient logs, in-patient census, and regular communication with the Site's DISCOVERY PI and stroke team. If required at a CPS, a waiver of HIPAA authorization must be in place to screen medical records to identify potentially eligible participants.

If and whenever possible, the CPS research team will attempt to recruit and enroll study participants during their index hospitalization. Permission to approach a potential participant about DISCOVERY will be obtained from a member of the clinical team. Study personnel will then briefly describe the study purpose and procedures to the potential participant and/or their family and gauge interest in participation.