**Supplementary Table 1: Summary of schedule detailing assessments required at each visit. “**X” indicates action to be taken or an investigation to be performed. TSAT; transferrin saturation; BCP, biochemical profile (consisting of urea and electrolytes; creatinine, liver function tests, albumin, total protein, calcium, phosphate and bicarbonate); eGFR; estimated glomerular filtration rate: FBC; full blood count (consisting of hemoglobin; white cell count, platelets); CRP; C-reactive protein; uACR/uPCR; urinary albumin: creatinine or protein:creatinine ratio. PWV = pulse wave velocity; AiX = augmentation index, NT Pro BNP = N terminal Pro brain natriuretic peptide. BMI = Body mass index. MLHF =Minnesota Living with Heart Failure Questionnaire. RLSS =Restless Leg Syndrome Scale. KD-QoL-SF36 =Kidney Disease Quality of Life Short form survey 36. NYHA classification = New York Heart Association Classification.

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| --- | --- | --- | --- |
|  | **Screening** |  | **Post Treatment Period** |
|  | **Visit 1 Screening** | **Visit 2** | **Visit 3** | **Visit 4** |
| **PROCEDURES** | **Weeks -4 to -2****Database search** **& Bloods** | **Week 0** **Baseline** | **1 month** | **3 months** |
| Written Informed consent | X |   |   |   |
| Demographic Details | X |   |   |   |
| Randomisation & Unique Number |   | X |   |   |
| Inclusion/Exclusion | X |   |   |   |
| Primary Diagnosis | X |   |   |   |
| History/Patient Information | X |   |   |   |
| Physical Examination | X |   |  |  |
| Height | X |   |   |   |
| Vital Signs | X | X | X | X |
| Weight/BMI | X | X | X | X |
| Blood pressure | X | X | X | X |
| Medication check | X | X | X | X |
| IV iron or IV placebo |   | X |   |   |
| BLOOD TESTS |   |   |   |   |
| BCP/eGFR | X | X | X | X |
| FBc (Hb) | X | X | X | X |
| C-Reactive Protein | X |   | X | X |
| Serum ferritin | X |   | X | X |
| Transferrin Saturation (TSAT) | X |   | X | X |
| uACR/uPCR |   | X | X | X |
| FUNCTIONAL TESTS |   |   |   |   |
| 6-Minute Walk Test  |   | X | X | X |
| MLHF Questionnaire |   | X | X | X |
| RLSS |  | X | X | X |
| KD-QoL-SF survey |   | X | X | X |
| NYHA classification |   | X | X  | X  |
| MECHANISTIC STUDIES |   |   |   |   |
| Vicord recorder for PWV and AiX measurements |   | X | X | X |
| NT- Pro-BNP |   | X | X | X |
| Biomarkers |   | X | X | X |
| Inflammatory Markers |  | X |  | X |
| Oxidative stress  |  | X  |   | X  |
| CARDIAC IMAGING |   |   |   |   |
| 12 Lead ECG |  X |  | X | X |
| Cardiac Echo (speckle tracking) |   | X | X | X |
|  |  |  |  |  |