**Table S1**. Female Stratified Modeled Bootstrapped Estimates and 95% Confidence Intervals at select Gestational Age Cut Points

| Metric | Estimate | GA at Scan = 28 | GA at Scan = 29 | GA at Scan = 30 | GA at Scan = 31 | GA at Scan = 32 | GA at Scan = 33 |
|---|---|---|---|---|---|---|---|
| Q | -0.0034 | -0.0951 | -0.0985 | -0.1019 | -0.1053 | -0.1087 | -0.1121 |
| | (-0.0197 - 0.0058) | (-0.5518 - 0.1629) | (-0.5715 - 0.1687) | (-0.5912 - 0.1746) | (-0.6109 - 0.1804) | (-0.6306 - 0.1862) | (-0.6503 - 0.1920) |
| GE | -0.0002 | -0.0065 | -0.0067 | -0.007 | -0.0072 | -0.0074 | -0.0077 |
| | ( -0.0021 - 0.0003) | (-0.0580 - 0.0083) | (-0.0600 - 0.0086) | (-0.0621 - 0.0089) | (-0.0642 - 0.0092) | (-0.0662 - 0.0095) | (-0.0683 - 0.0098) |
| LE | 0.0006 | 0.0158 | 0.0164 | 0.0169 | 0.0175 | 0.0181 | 0.0186 |
| | (-0.0008 - 0.0052) | (-0.0235 - 0.1466) | ( -0.0243 - 0.1519) | (-0.0252 - 0.1571) | (-0.0260 - 0.1624) | (-0.0268 - 0.1676) | (-0.0277 - 0.1728) |
| $\gamma$ | -0.0098 | -0.2753 | -0.2851 | -0.2949 | -0.3048 | -0.3146 | -0.3244 |
| | (-0.0139 - 0.0013) | (-0.3894 - 0.0370) | (-0.4033 - 0.0383) | (-0.4172 - 0.0396) | (-0.4311 - 0.0409) | (-0.4450 - 0.0423) | (-0.4589 - 0.0436) |
| $\lambda$ | 0.001 | 0.0291 | 0.0302 | 0.0312 | 0.0322 | 0.0333 | 0.0343 |
| | (-0.0010 - 0.0088) | (-0.0291 - 0.2454) | (-0.0301 - 0.2541) | (-0.0311 - 0.2629) | (-0.0322 - 0.2717) | ( -0.0332 - 0.2804) | (-0.0342 - 0.2892) |
| $\sigma$ | -0.0084 | -0.2349 | -0.2432 | -0.2516 | -0.26 | -0.2684 | -0.2768 |
| | (-0.0125 - 0.0009) | (-0.3512 - 0.0260) | (-0.3638 - 0.0269) | (-0.3763 - 0.0279) | (-0.3888 - 0.0288) | (-0.4014 - 0.0297 | (-0.4139 - 0.0307) |

**Table S2.** Male Stratified Modeled Bootstrapped Estimates and 95% Confidence Intervals at select Gestational Age Cut Points

| Metric | Estimate | GA at Scan = 28 | GA at Scan = 29 | GA at Scan = 30 | GA at Scan = 31 | GA at Scan = 32 | GA at Scan = 33 |
|---|---|---|---|---|---|---|---|
| Q | -0.0048 | -0.1332 | -0.1379 | -0.1427 | -0.1474 | -0.1522 | -0.1569 |
| | (-0.0120 - 0.0023) | (-0.3355 - 0.0634) | (-0.3474 - 0.0657) | (-0.3594 - 0.0680) | (-0.3714 - 0.0702) | (-0.3834 - 0.0725) | (-0.3954 - 0.0748) |
| GE | 0.0006 | 0.0158 | 0.0164 | 0.0169 | 0.0175 | 0.0181 | 0.0186 |
| | (-0.0001 - 0.0010) | ( -0.0032 - 0.0285) | (-0.0034 - 0.0296) | (-0.0035 - 0.0306) | (-0.0036 = 0.0316) | (-0.0037 - 0.0326 | (-0.0038 - 0.0336) |
| LE | -0.0012 | -0.0347 | -0.036 | -0.0372 | -0.0385 | -0.0397 | -0.0409 |
| | (-0.0020 - - 0.0002) | (-0.0552 - - 0.0045) | (-0.0571- - 0.0047) | (-0.0591 - - 0.0049) | (-0.0611 - - 0.0050) | (-0.0630 - - 0.0052) | (-0.0650 - - 0.0053) |
| $\gamma$ | -0.0025 | -0.0687 | -0.0711 | -0.0736 | -0.076 | -0.0785 | -0.0809 |
| | (-0.0268 - 0.0341) | (-0.7514 - 0.9551) | (-0.7782 - 0.9892) | (-0.8051 - 1.0233) | (-0.8319 - 1.0574) | (-0.8587 - 1.0915) | (-0.8856 - 1.1256) |
| $\lambda$ | -0.0023 | -0.0645 | -0.0668 | -0.0691 | -0.0714 | -0.0737 | -0.076 |
| | (-0.0035 - - 0.0004) | (-0.0979 - - 0.0119) | (-0.1014 - - 0.0124) | (-0.1048 - - 0.0128) | (-0.1083 - - 0.0132) | (-0.1118 - - 0.0136) | (-0.1153 - - 0.0141) |
| $\sigma$ | -0.0023 | -0.0633 | -0.0656 | -0.0678 | -0.0701 | -0.0724 | -0.0746 |
| | (-0.0343 - 0.0310) | (-0.9598 - 0.8668) | (-0.9941 - 0.8977) | (-1.0283 - 0.9287) | (-1.0626 - 0.9596) | (-1.0969 - 0.9906) | (-1.1312 - 1.0215) |

## Supplementary Figures

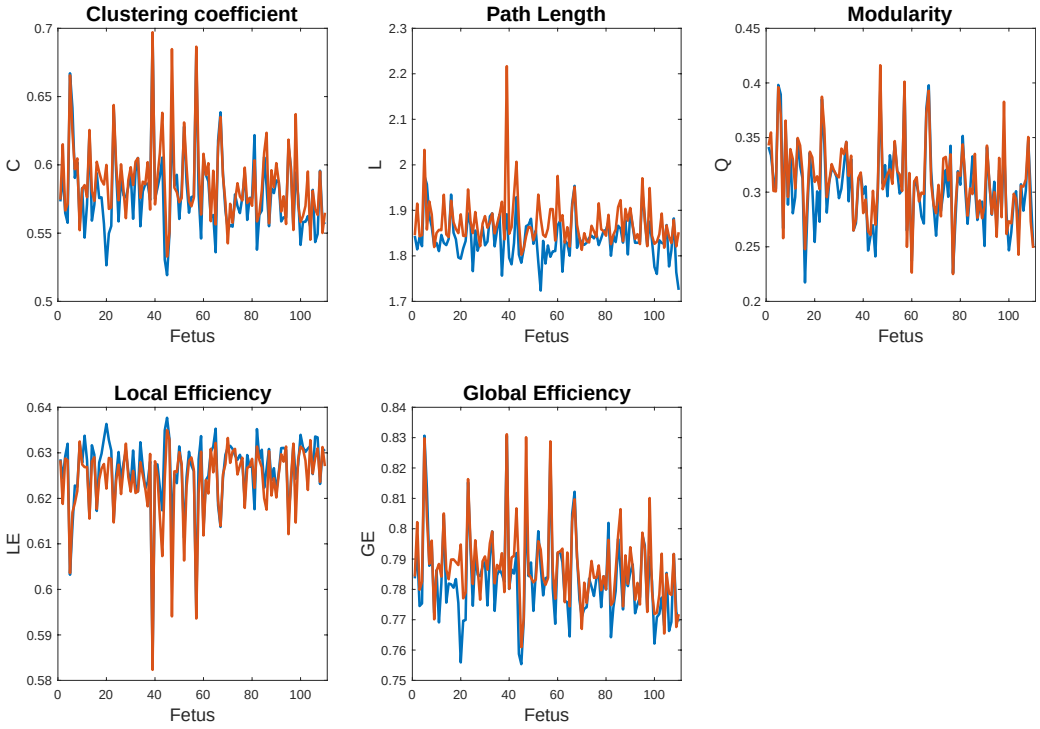


**Figure S1.** Correlation network metrics computed from full (blue) vs partial (red) time series data.

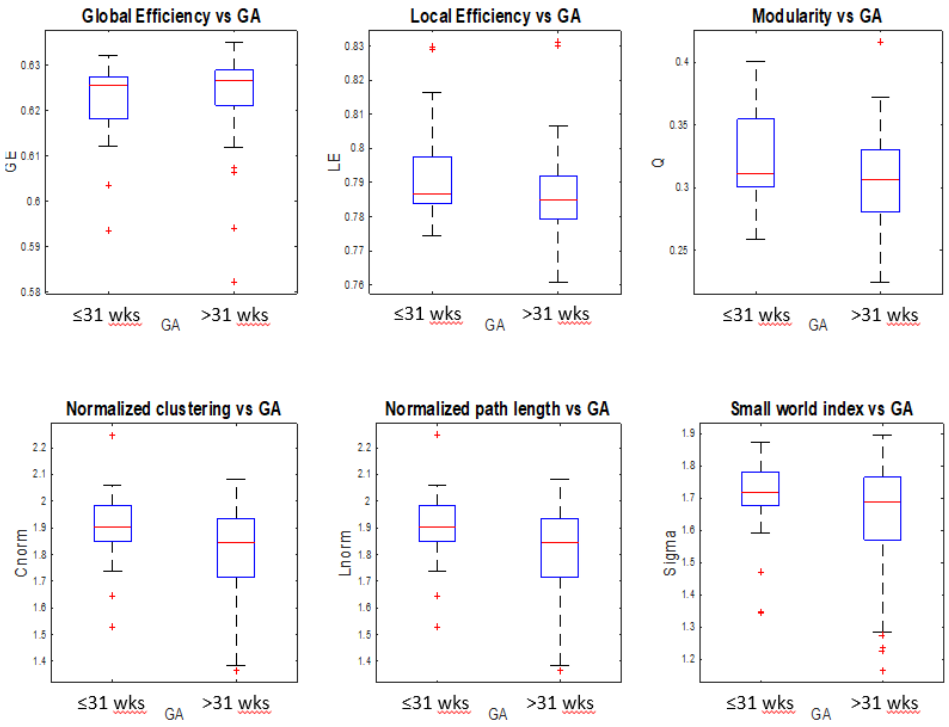


**Figure S2.** Global network metrics and gestational cut-points.