This MICCAI paper is the Open Access version, provided by the MICCAI Society. It is identical to the accepted version, except for the format and this watermark; the final published version is available on SpringerLink.



# A Complete Hybrid-CBM Prior and Distribution Sweep

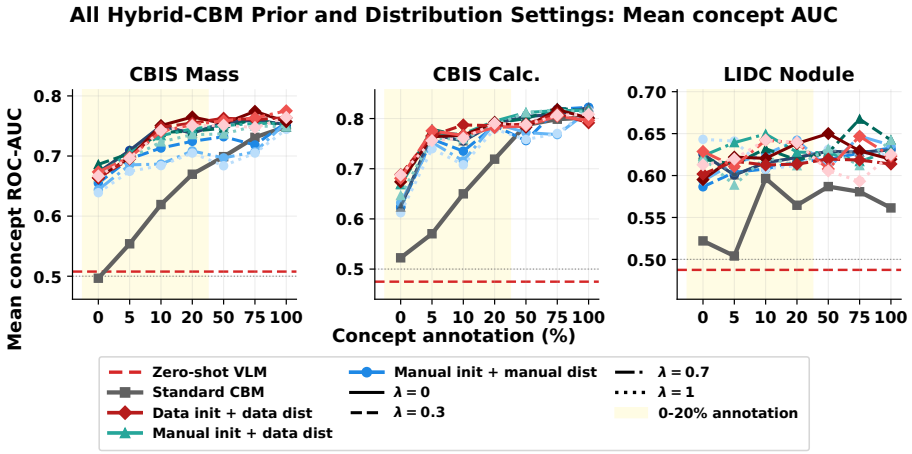



**Fig. S1.** Complete mean concept ROC-AUC sweep across evaluated prior sources and distribution-loss weights. The shaded region denotes the 0–20% low-annotation regime emphasized in the main analysis.

# B Diagnosis-Head Weight Drift

**Table S1.** Diagnosis-head weight drift at 0% concept annotation. Each cell reports L2 drift from initialization, with relative drift in parentheses.

| Task | Data init + anchor | Data init, no anchor | Manual init + anchor | Random init |
|---|---|---|---|---|
| CBIS-DDSM mass | 0.024 (0.35%) | 0.019 (0.28%) | 0.027 (0.39%) | 0.817 (141.51%) |
| CBIS-DDSM calcification | 0.025 (0.22%) | 0.024 (0.21%) | 0.016 (0.16%) | 0.877 (151.90%) |
| LIDC-IDRI nodule | 0.024 (0.41%) | 0.021 (0.36%) | 0.006 (0.12%) | 0.492 (85.25%) |