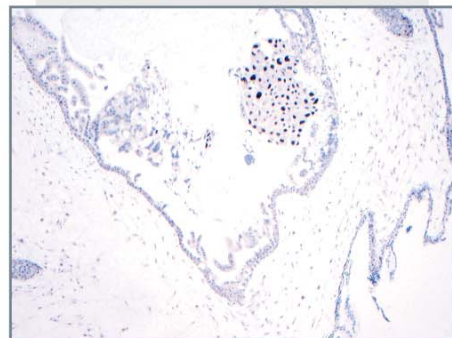


H&E



Ki-67

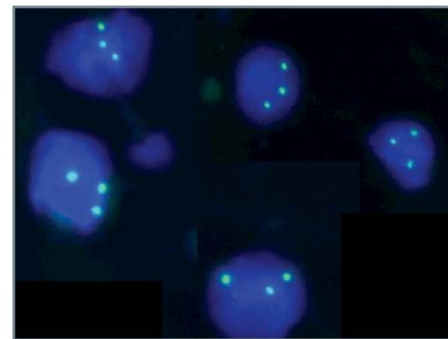


p57

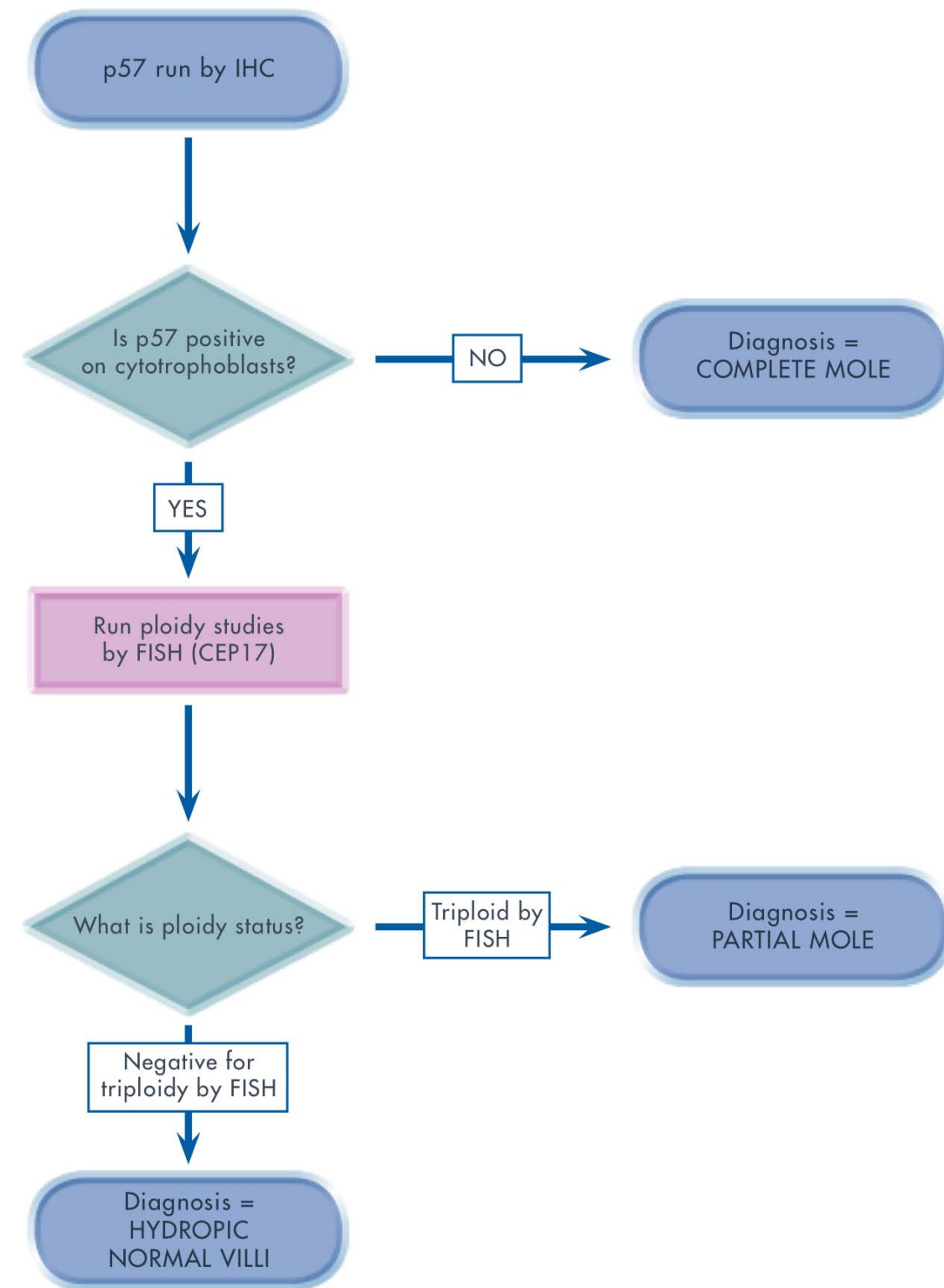
H&E shows morphological features, including trophoblastic proliferation, suggestive of mole. The diagnosis of complete mole is confirmed by documenting complete absence of p57 expression in the cytotrophoblasts (with positive signal in the 'intermediate trophoblasts' serving as internal controls), along with a very high Ki-67-defined cell proliferation index.

Identification of complete and partial hydatidiform moles: p57kip2 is a paternally imprinted, maternally expressed gene that is not expressed in the cytotrophoblasts of complete moles (which are of paternal origin only). It is positive in both partial moles and normal hydropic villi. In addition, complete moles are characterized by high Ki-67-defined proliferative index in the cytotrophoblasts.

Further distinction of partial moles from hydropic normal villi can be made by identifying the triploid nature of incomplete moles. This can be accomplished by fluorescence in situ hybridization studies using a chromosome 17 probe to ascertain ploidy (see flow chart next page). It should be noted that these mole ploidy studies are best interpreted in conjunction with morphology for the evaluation of both complete and partial moles.



CEP17 FISH - Hydatidiform Mole
Triploidy, as documented by FISH, confirms the diagnosis of partial mole.



Identification of complete and partial hydatidiform moles: This flow chart summarizes the sequence of IHC and FISH studies that are performed on specimens to evaluate for the presence of molar pregnancy, and to distinguish among complete mole, partial mole, and non-molar pregnancy (e.g., hydropic normal villi).