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Nonmydriatic digital imaging alternative for annual retinal examination in persons with previously documented no or mild diabetic retinopathy.

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PURPOSE: To prospectively evaluate the Joslin Vision Network (JVN) for follow-up annual retinal examination for level of diabetic retinopathy (DR). **DESIGN:** Prospective cohort study. **METHODS:** Fifty-two patients with no or mild nonproliferative DR (Early Treatment Diabetic Retinopathy Study [ETDRS] level < or = 35) and no diabetic macular edema (DME) at dilated retinal examination 11 or more months earlier were imaged. Patients then had dilated retinal examination and color 35-mm seven standard field stereoscopic photography (ETDRS photographs) and completed a satisfaction survey. Level of DR determined from JVN images, clinical examination, and ETDRS photographs was compared. **RESULTS:** Two (1.9%) eyes had JVN images ungradable for level of DR. In the 102 gradable eyes (98.1%), JVN diagnosis exactly matched clinical examination for level of DR in 82 eyes (77.9%) and was within one level of DR in all eyes (100%). Three eyes (2.9%) had JVN images ungradable for DME; one of these eyes had DME by clinical examination. JVN diagnosis matched clinical examination for DME in all eyes (101) gradable by JVN. Fifty patients (96.1%) reported JVN imaging improved their understanding of eye disease, 100% were satisfied with JVN, and forty-eight (92.3%) would consider replacing dilated examination by their eye doctor with JVN imaging. **CONCLUSIONS:** JVN digital imaging closely matched clinical examination for level of DR and DME, would have resulted in no patients receiving less stringent follow-up, and was well accepted by patients. JVN digital imaging may be a suitable alternative for annual dilated retinal examination for determining level of DR or DME and appropriate follow-up comprehensive ophthalmic examination.

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