



# Retinal Photos improve the detection of Diabetic Retinopathy



(among Chinese diabetics in a primary care setting)

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## Background

➤ Overseas studies demonstrated that retinal photography (RP) has acceptable sensitivity in screening for diabetic retinopathy (DMR) and is superior to ophthalmoscopy alone.

## Aim

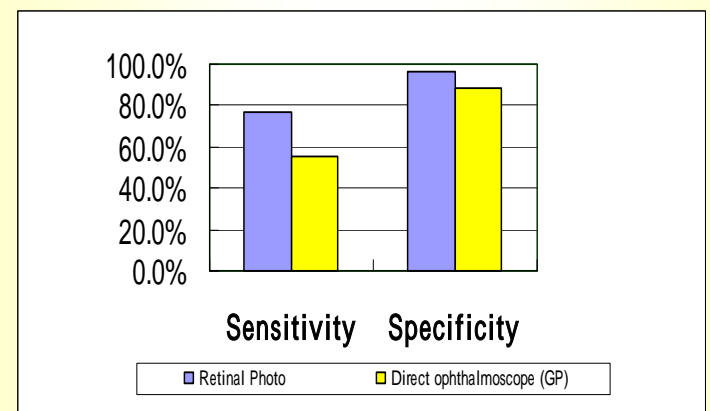
- To assess the sensitivity and specificity of RP (interpreted by ophthalmologists) in detecting DMR among Chinese diabetics using ophthalmologists' clinical assessment as reference standard.
- To compare the accuracy of General Practitioner using direct ophthalmoscope with that of RP

## Methods

- Setting : Primary care settings. Most of them were patients attending the Government General Outpatient Clinics. Less than 5% were patients of private doctors.
- Study period : November 1996 to August 1997.
- Method : Retinal Photos were taken for both eyes using a Canon CR-45 UAF camera after pupil dilatation. The patients were clinically assessed by ophthalmologists (the reference standard) and then by general practitioners. The retinal photos were subsequently interpreted by the ophthalmologists, blindly without knowing the diagnosis made during clinical assessment. The findings were classified according to the "Airlie House Classification" for DMR.

## Results

312 patients completed the study. As compared with the reference standard, RP had a sensitivity of 76.9% and specificity of 96%. Direct ophthalmoscopy by general practitioners yielded a sensitivity of 55.4% and specificity of 88.3%. The difference between the two methods was statistically significant ( $p < 0.05$ ).



## Conclusion

In our study population, Retinal Photo interpreted by ophthalmologists had good specificity. Its sensitivity was comparable to overseas figures. It was superior to direct ophthalmoscopy performed by general practitioners in both sensitivity and specificity. Retinal Photography did improve the detection of diabetic retinopathy in Chinese diabetes in our locality.