# Introduction

The original UBM was first developed by **Pavlin,1990**.

UBM is high frequency (50) Mhz high resolution ultrasound which is capable of imaging the cornea, iris , anterior chamber, anterior chamber angle and ciliary body with great detail **(pavlin and Foster,2001)**.

The strength of UBM lies in its ability to produce cross sections of the living eye at microscopic resolution without violating the integrity of optical microscopy, it gives us images in living eyes without affecting the internal relationships of the structures imaged **(pavlin and Foster,2001)**.

In recent years, ophthalmic ultrasound has become an indispensable diagnostic tool. That has increased our ability to detect and differentiate many ocular and orbital disorders. This painless, non invasive, dynamic examination can be performed in the clinic, at the patient's bedside, or in the operating room ( **Pavlin et al., 2005**).

Ultrasound biomicroscopy has given us a new method for detection, characterization, measurement and follow up of anterior segment intraocular tumors as iris tumors, ciliary body tumors and anterior choroidal tumors can be imaged ( **Pavlin et al., 2008**).

UBM adds the element of depth to the assessment and follow up of anterior segment tumors. Technique is similar to measuring posterior segment tumors i.e. Freeze an image that passes perpendicularly through the greatest thickness of the tumor, and use the calipers to measure the greatest thickness relative to the long axis of the tumor ( **Pavlin et al., 2009**).

Melanoma is the most common primary uveal malignancy. Iris and ciliary body melanomas constitute approximately 15% of the cases of melanoma although these lesions are commonly studied through slit-lamp biomicroscopy, gonioscopy, and B-Scan ultrasound, high-frequency ultrasound (UBM) is becoming essential because it allows accurate visualization of these lesions. ( **Pavlin et al., 2009**).

It provides precise measurement of small tumors or ciliary body tumors hidden behind the iris, and it is possible to achieve differentiation between solid and cystic lesions, as well as to measure limits of the lesions, adjacent structure invasion, and growth patterns (**Kunimatsu et al., 1999**).

High-frequency ultrasonography may be used to assess the extent of squamous conjunctival neoplasia. While the 50-MHz system offered better resolution, 20-MHz ultrasonography allowed for a wider and deeper field of view. **(Ho et al., 2007)**.

High-frequency ultrasonography was useful in determining tumor thickness, shape, and internal reflectivity, and especially in revealing tumor extension into the sclera, eye, and orbit **(Conway et al., 2005).**

Ultrasound biomicroscopy (UBM) has become indispensable for evaluating anterior segment tumors and cysts, including those undetectable by slitlamp biomicroscopy or conventional water-bath ultrasonography (**Augsburger et al.,2002**).