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**Iris Biopsy in Uveitis: Masquerade Syndrome**

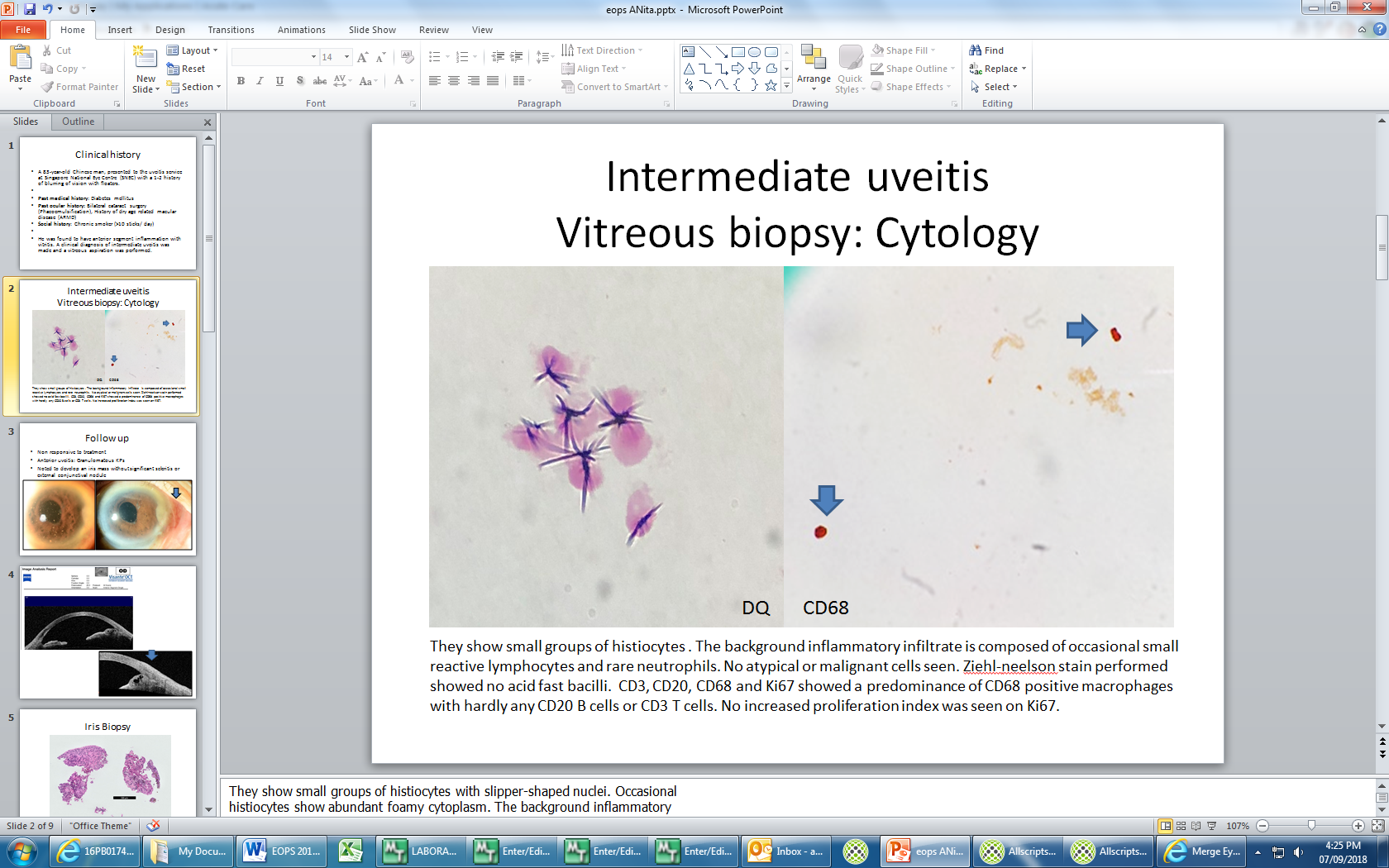
A 83-year-old Chinese man, presented to the uveitis service at Singapore National Eye Centre (SNEC) with a 1-2 history of blurring of vision with floaters.

**Past medical history**: Diabetes mellitus

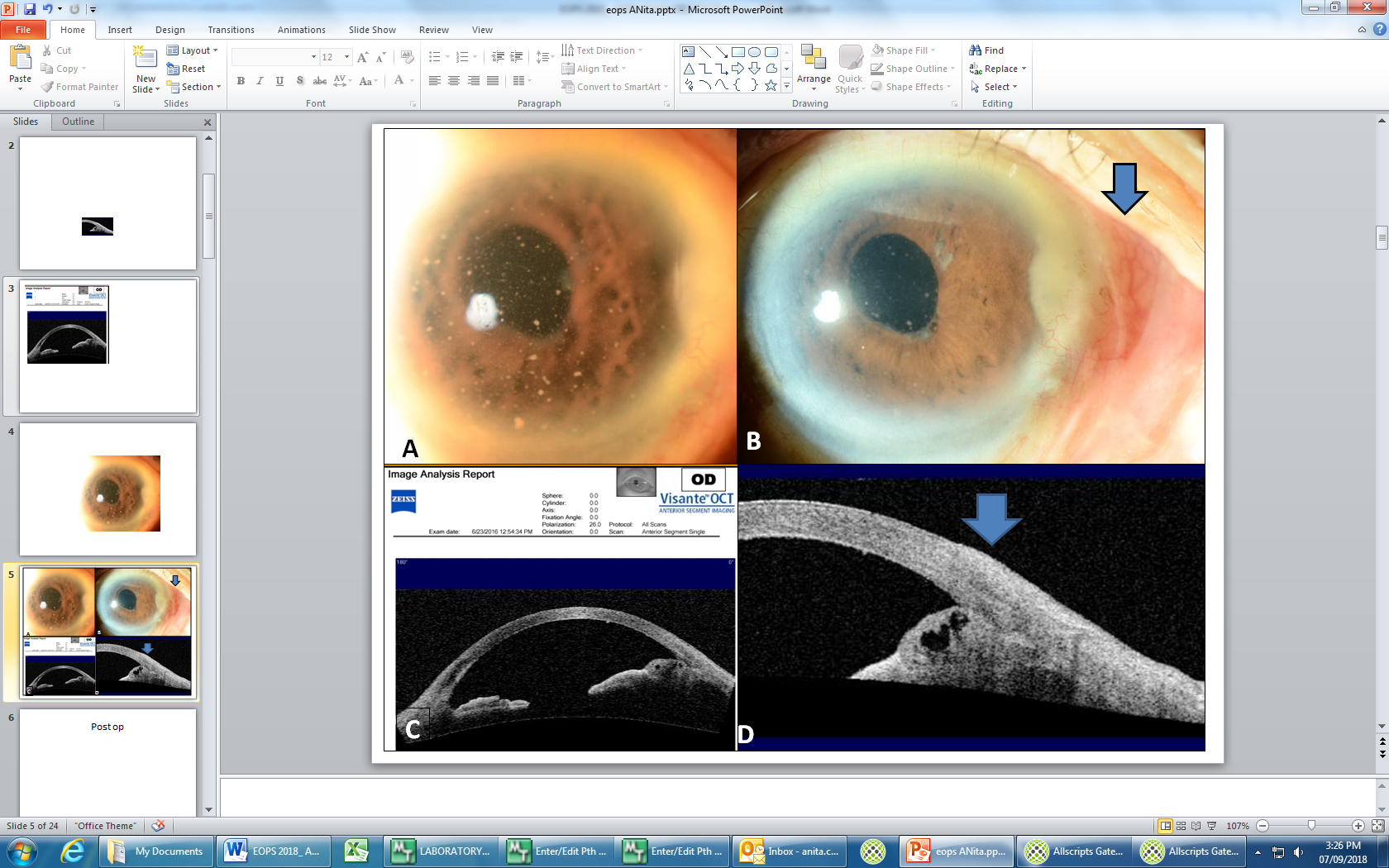
**Past ocular history:** Bilateral cataract surgery (Phacoemulsification), History of dry age related macular disease (ARMD)

**Social history**: Chronic smoker (>10 sticks/ day)

He was found to have anterior segment inflammation with vitritis. A clinical diagnosis of intermediate uveitis was made and a vitreous aspiration was performed.

**Figure 1:** Vitreous Cytology showing a paucicellular yield of predominantly CD68 positive macrophages with hardly any other lymphocytes staining for CD3, CD20 or Ki67 proliferation marker.

Patient subsequently developed a nasal iris mass.



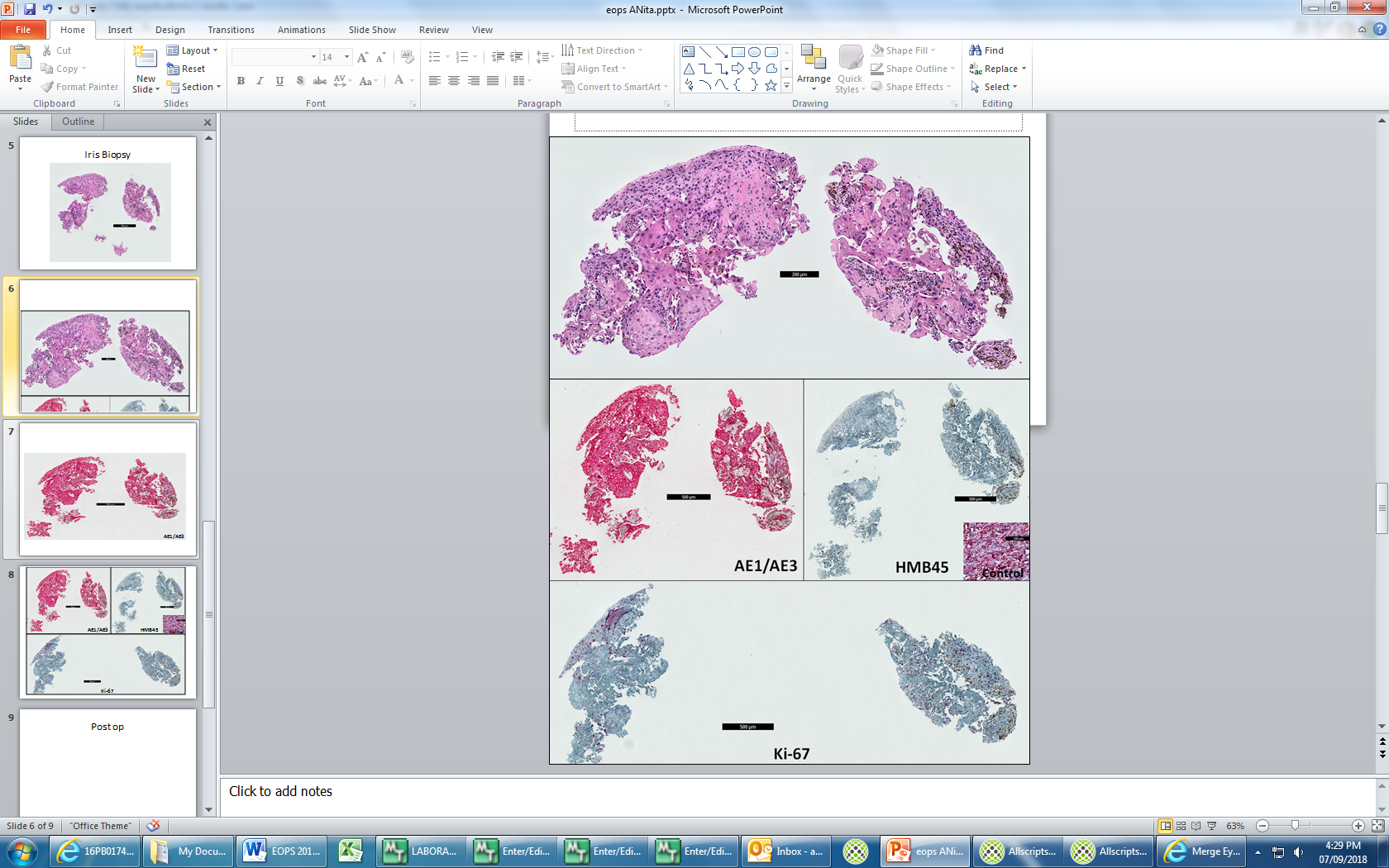
**Figure 2: anterior segment photos and OCT**

**2A:** Small to medium sized keratic precipitates (granulomatous KPs)

**2B:** Nasal temporal whitish iris mass abutting cornea. Note the lack of significant conjunctival and scleral mass or erythema in the nasal conjunctiva/ sclera.

**2C, D:** Anterior segment Optical coherence tomography (AS-OCT, VISANTE©) demonstrating an iris mass with cystic spaces**.**

**An iris biopsy was performed:**



**Microscopic findings:**

Sections show a small fragment of iris tissue completely infiltrated by a squamous cell proliferation. Hardly any normal iris tissue is present. The squamous cells are positive for AE1/AE3 and negative for HMB45 negating an melanoma (in the presence of a working external control). The Ki-67 proliferation index is increased (10-20%) in the tumour cells. Granulomas are not present.

**Diagnosis**: Squamous cell carcinoma likely metastatic in view of lack of external surface lesion.

**Post biopsy:** Patient was found on CXR and CT thorax to have a lung nodule. Although a smoker, patient had no prior history of a lung lesion and this was the first time the lesion was noted. In view of patient’s age, patient and family declined radical surgery and opted for palliative treatment.

**Discussion**

Iris metastases are rare and occur in 4-8% of systemic cancers.1 Although previously recognized in anectodal case reports, Ferry and Font provided the first complete analysis of metastatic carcinomas to the anterior segment in 26 eyes.2 In their series, they noted a propensity for the tumour to involve the horizontal meridian of the iris or cilary body,2 which is similar to our case (Figure 2A, B). Most common primary sites of malignancy are the lung (in men) and breast (in women).1-3 Metastatic cancers to the iris can manifest as a uveitis masquerade with secondary glaucoma.1,4,5 They can present with a granulomatous type of inflammation.4,5 These keratic precipitates may represent pseudoKPs6 or a granulomatous reaction to the tumour cells (Figure 2A,B). In our case, there was no posterior uveal involvement although a reactive granulomatous response was seen in the anterior vitreous cytology (Figure 1). Squamous cell carcinoma metastasis to the iris have been reported to present as an solid iris mass with cystic spaces on imaging.6 This is similar to our case (Figure 2C,D). A high index of suspicion is necessary and direct iris biopsy or aqueous cytology are usually required for tissue diagnosis. In some cases, the iris metastasis may be the first presentation of tumour.6

**References:**

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