Introduction
Necrolytic migratory erythema (NME) is a rare skin condition, first described in 1942 by Becker et al. Most of NME cases are associated with rare pancreatic neuroendocrine tumours. NME has also been associated with hepatic cirrhosis, celiac disease, cystic fibrosis with intestinal malabsorption and nutritional deficiencies of amino acid, zinc, and essential fatty acids. Here, we report a case whereby a distinctive cutaneous sign was recognized and aid us in the diagnosis of a rare underlying neoplasim.

Case report
A 69 years old Malay gentleman presented with 8 months history of progressive widespread pruritic erythematous rash and erosion, associated with pruritus and tenderness. He complained of severe LOA and had lost about 10kg of weight. He denied any gastrointestinal symptom.

Physical examination revealed him to be cachectic with extensive annular erythematous scaly and crusted plaques at the extremities, groin and buttock (Fig. 1, 2, 3 & 4). Some lesions were ulcerated and hyperpigmented at the edge. He also had angular cheilitis and glossitis. A clinical diagnosis of NME was made. A differential diagnosis of acrodermatitis enteropathica, seborrhoeic dermatitis and pemphigus were considered.

Comprehensive laboratory tests showed normochromic, normocytic anaemia (10.7g/dL, MCV 90.7fl, MCH 31.1pg), hyperglycaemia (7.0mmol/L), and hypoalbuminaemia (25.3g/L). Serum amino acids profile and tumour markers (CEA, AFP and PSA) were normal. Unfortunately, serum glucagon, insulin, gastrin, and vasoactive intestinal peptide, and zinc levels were not measured as the tests were not readily available.

Skin biopsy demonstrated (Fig. 5 & 6) vacuolated keratinocytes within upper epidermis, subcorneal clefing with associated neutrophilic infiltrates, psoriasiform hyperplasia and spongiosis and angioplasia at the papillary dermis.

A contrast-enhanced CT scan of the abdomen and pelvis demonstrated a large multilobulated heterogeneous lesion at the pancreatic tail, invading the splenic hilum (Fig. 7). No metastases or lymphadenopathy was seen.

Distal pancreatectomy with total excision and splenectomy were carried out. Postoperatively, the rash began to improve gradually. Histopathology of the mass has confirmed a grade 2 neuroendocrine tumour with splenic involvement.

Discussion
Glucagonoma is a rare glucagon producing pancreatic neuroendocrine islet alpha-cells tumour. It is usually located in the distal pancreas. Estimated annual incidence is about 1/20,000,000. Glucagonoma syndrome constitutes of NME, glucagonoma, diabetes mellitus, weight loss, glossitis, cheilitis, anaemia and neuropsychiatric disturbances.

NME is the hallmark of glucagonoma syndrome and an invaluable marker for diagnosis of the underlying malignancy in many cases. NME most often affects the lower legs, genital, groin, buttocks and anal region. It is characterized by erythematous plaque with irregular border, vesicles or blisters, and crust formation. The lesions may extend outward when the center begins to heal and scar leaving a hyperpigmented scar. NME is the hallmark of glucagonoma syndrome: a review of its features and discussion of new perspectives. Am J Med Sci 2001; 306:320.

Glucagonomas are surgically removed, as with our patient. Pathogenesis of NME remains unclear. The role of glucagon in the causation of NME is supported by evidence. Remission of the rash can be induced with somatostatin analogs therapy or if the glucagonomas are surgically removed, as with our patient.

Histology of the skin lesions often show parakeratosis, loss of the granular layer, necrosis, and separation of the upper epidermis with vacuolization of the keratinocytes, dyskeratotic keratinocytes, and neutrophils in the upper epidermis. Surgical removal of the tumor is a definitive and accepted treatment option.

Conclusion
Early recognition of NME led to diagnosis of glucagonoma, allowing surgical resection and a promising therapeutic outcome.