



Role of Immunotherapy in the Treatment of Recurrent Hereditary Diffuse Gastric Cancer

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INTRODUCTION

Gastric cancer is the third leading cause of cancer related deaths worldwide. Hereditary diffuse gastric cancer is a rare cancer caused by CDH1 genetic mutation. Immunotherapy has been shown to increase overall response rates in gastrointestinal cancers especially in those with DNA mismatch repair-deficient or microsatellite-instable tumors.

CASE DESCRIPTION

This is a 41-year-old asian female with past medical history of stage IIB signet ring type gastric cancer diagnosed 12 years ago, status post subtotal gastrectomy with a block transverse colectomy followed by concurrent chemoradiation, who presented with disease recurrence after 10 years

- Treated with 5-FU, followed by surgical resection and adjuvant chemotherapy
- Genetic screening showed CDH1 mutation
- During regular EGD monitoring, she was found to have erythema of gastric mucosa
- Biopsy confirmed recurrence of her poorly differentiated adenocarcinoma
- She underwent treatment with oxaliplatin based chemotherapy combined with Nivolumab for six cycles.

CASE Continued

- PET CT scan and EGD showed positive response to chemoimmunotherapy.
- She is awaiting surgical resection followed by adjuvant therapy with chemotherapy either alone or in combination with immunotherapy.

NIVOLUMAB MECHANISM OF ACTION

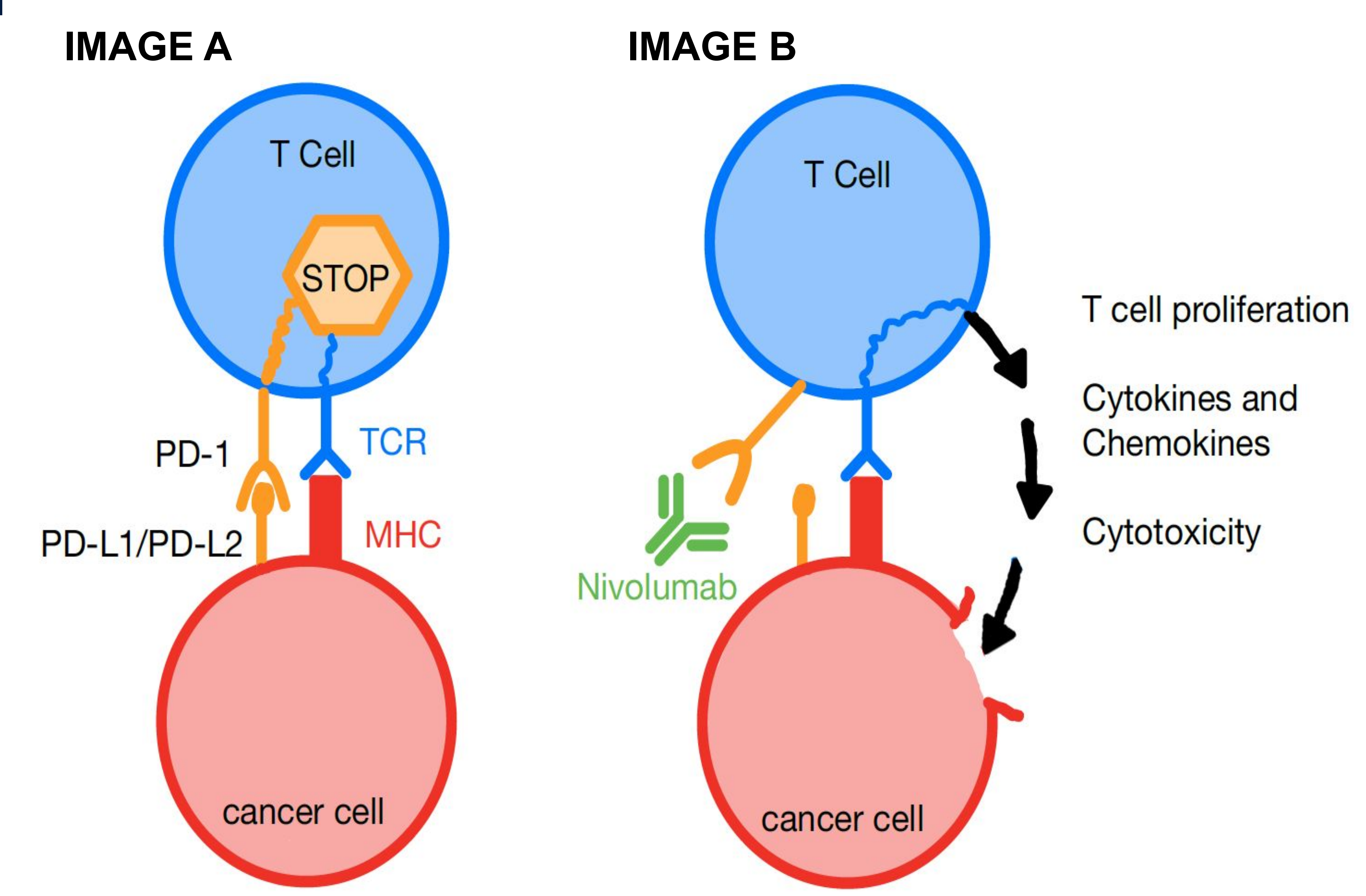


Image A: PD-1 pathway suppressing anti-tumor activity
Image B: Nivolumab PD-1 blockade

DISCUSSION

- Gastrectomy and chemotherapy are the mainstay treatments for hereditary diffuse gastric cancer.
- Nivolumab has been shown to be effective in heavily pretreated gastric cancers.
- The combination therapy of nivolumab plus chemotherapy achieved a clinically meaningful overall survival benefit in the first line setting in all advanced gastric adenocarcinoma.
- Clinical trials and research encompassing antibody treatments, such as targeted anti-PD1 antibodies, are ongoing and could offer additional treatment options in patients with advanced gastric cancer.

CONCLUSION

A positive response was seen in the treatment of recurrent hereditary diffuse gastric cancer with immunotherapy and chemotherapy combination.

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