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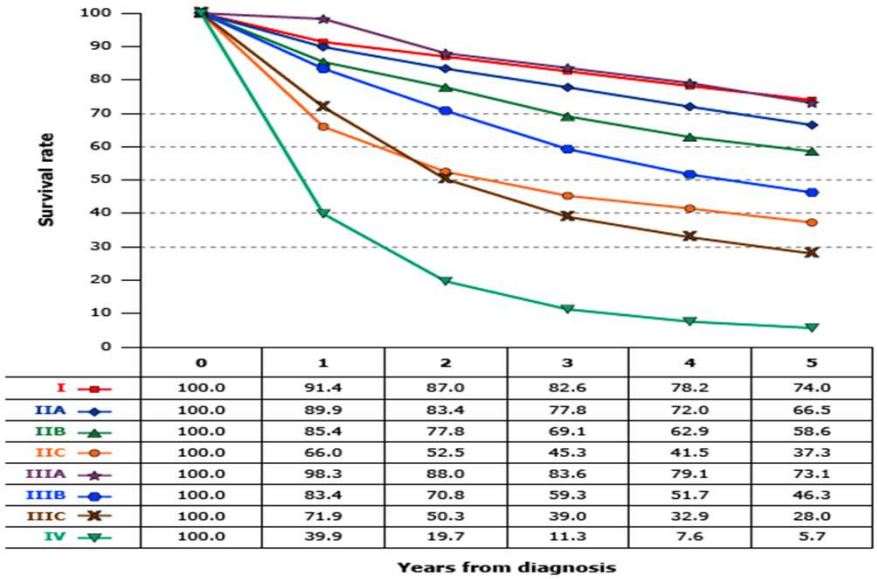
SEER 5-year survival rate for colorectal cancer in USA 2023

SEER Stage	Percentage Diagnosed	Five-Year Survival Rate
Localized	35%	90.9%
Regional	35%	73.4%
Distant	23%	15.6%
Unstaged	6%	48.6%
Overall		65%

5-year survival of CRC by age and stage at diagnosis 2004-2014

Age (y)	AJCC Stage	n	1-year		5-years	
			Survival (%)	95% CI	Survival (%)	95% CI
20-64	I	26,341	98.3	98.1, 98.5	95.2	94.7, 95.6
	IIA	21,680	98.2	97.9, 98.4	89.6	89.0, 90.2
	IIB	4,169	90.7	89.7, 91.6	67.6	65.8, 69.4
	IIIA	4,433	98.2	97.7, 98.6	91.3	90.0, 92.4
	IIIB	17,945	96.1	95.8, 96.4	76.9	76.0, 77.7
	IIIC	11,853	93.5	93.0, 94.0	61.8	60.7, 62.8
	IV	30,669	64.7	64.1, 65.2	14.2	13.7, 14.7
≥65	I	33,848	92.5	92.1, 92.9	89.1	88.3, 89.8
	IIA	33,564	91.9	91.5, 92.3	84.4	83.5, 85.1
	IIB	5,972	75.9	74.6, 77.1	55.0	53.0, 56.9
	IIIA	3,872	92.2	91.0, 93.2	85.1	82.8, 87.1
	IIIB	20,198	85.6	85.0, 86.1	64.6	63.6, 65.7
	IIIC	11,376	77.4	76.5, 78.2	45.5	44.2, 46.8
	IV	30,246	39.1	38.5, 39.7	7.4	7.0, 7.8

SURVIVAL BY



	0	1	2	3	4	5
I	100.0	91.4	87.0	82.6	78.2	74.0
IIA	100.0	89.9	83.4	77.8	72.0	66.5
IIB	100.0	85.4	77.8	69.1	62.9	58.6
IIC	100.0	66.0	52.5	45.3	41.5	37.3
IIIA	100.0	98.3	88.0	83.6	79.1	73.1
IIIB	100.0	83.4	70.8	59.3	51.7	46.3
IIIC	100.0	71.9	50.3	39.0	32.9	28.0
IV	100.0	39.9	19.7	11.3	7.6	5.7

CHEMOTHERAPY OPTIONS

- Approx 80% of colon cancers are localized to the colon wall and lymph nodes.
- Surgery is the only curative modality for localized colon cancer.
- Goal of postoperative ADJUVANT therapy is to eradicate micrometastasis and increase cure rates.
- Benefits of adjuvant chemotherapy is established to stage III disease (Node positive)

CHEMOTHERAPY OPTIONS

- Approx 20-25% of colon cancers are diagnosed at advanced stage. (stage IV)
- Systemic chemotherapy is the mainstay of treatment.
- Treatment is PALLIATIVE and prolongs survival.
- VEGF inhibitors and Monoclonal antibodies are part of the chemotherapy backbone for treatment.
- Surgery is occasionally an option in selected oligometastatic disease.

BACKGROUND

- 5-fluorouracil (5-FU) was introduced in 1958 with modest improvement in treatment of advanced colon cancer.
- Further improvements were demonstrated by biomodulation of 5-FU activity when administered in conjunction with leucovorin.
- More effective 5 FU based combination regimen were designed over the years.
- Adjuvant chemotherapy was established as standard of care for Node positive disease in early 90's when clinical trials showed survival benefit. Initially 5 FU,Leucovorin and levamisole and subsequently different 5FU and leucovorin based regimen were shown effective.
- Oxaliplatin was subsequently proven to be superior when added to 5 FU and leucovorin and is currently established as the standard regimen.

CHEMOTHERAPY REGIMEN

- Most treatment involves a combination of oral and intravenous chemotherapy drugs
- Oxaliplatin, 5 Fluorouracil, leucovorin, Capecitabine
- Drugs are administered in a specific order and on specific days
- For Node positive colon cancer, a course of oxaliplatin containing chemotherapy is generally recommended for most patients. Treatment in older patients is controversial and is customised.

CHEMOTHERAPY-Benefits

NODE POSITIVE COLON CANCER, (Stage III)

- 30% reduction in risk of recurrence and 22-32% reduction in mortality with modern chemotherapy

NODE NEGATIVE COLON CANCER (Stage II)

- Benefit is small and treatment is individualized based on risk factors and shared decision making as well as choice of chemotherapy.
- (T4, <12 nodes in resected specimen, perforation, obstruction, poorly differentiated, lymphovascular invasion). In addition MMR and MSI status

CHEMOTHERAPY-Duration

SIX MONTHS VS THREE MONTHS

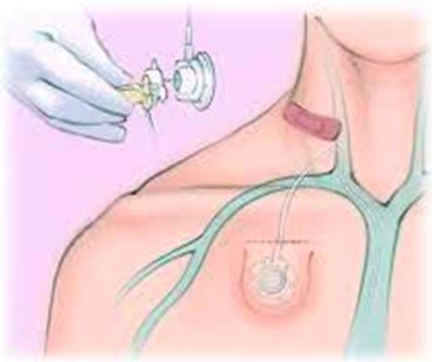
- Six month of therapy is the standard approach. Optimal duration is evolving
  - 6 MONTHS-high risk
  - 3 MONTHS-Low risk

CHEMOTHERAPY-side effects

- Generally should commence 6-8 weeks after surgery
- Placement of in central venous catheter (Mediport)
- Portable pump

SIDE EFFECTS (toxicities)

- Nausea, stomatitis, diarrhea, decreased appetite
- Myelosuppression (decreased blood counts)
- Peripheral neuropathy
- Hand foot syndrome



CHALLENGES & Future directions

- New models for risk determination
- New more effective regimens
- ctDNA

THANK YOU